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ORIGINAL ARTICLES.

THE INCISION, DIGITAL EXPLORATION AND DRAINAGE OF LUMBAR ABSCESSES.[1]

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Lumbar abscesses in their own intrinsic nature are not more dangerous than others. They are rendered especially perilous only by the inefficiency of our explorations and by the consequent incompleteness of our local treatment. When thoroughly explored and kept completely disinfected, they rarely cause death.

The first step towards safety is the exploration. Here we are confronted by the published opinions of some of our ablest men, especially of the older class, insisting that the opening of lumbar abscesses and even the aspiration of them is fearfully dangerous. The limits of this paper do not permit an elaborate discussion of this antiquated opinion, which was true under old methods, but false under new ones. I shall assume that the nine cases related in this paper, as well as other established facts of antiseptic surgery, prove that where a lumbar abscess can be freely opened and kept thoroughly disinfected, there is positively no danger in the procedure. There is no hectic, no exhaustion, no pyæmia nor septicæmia. On the contrary the patient rebounds towards health, as if relieved of a great depressing influence. He grows plumper and ruddier, and makes in many instances a good recovery. I grant that certain cases are best treated at the outset by repeated aspiration, but if this fails, or is inapplicable from the abscess being already open, then the open method with regular disinfection is necessary.

Assuming this to be true, the thorough exploration of the interior of the abscess is a prime necessity, and it cannot be accomplished without the use of the surgeon's finger. Treves, of London, publishes three cases of digital exploration, and Erichsen quotes them with approval; but most authors seem not to have thought of it, and apparently would be horrified at the very proposal of such a thing.

The time to be selected is the earliest one at which a diagnosis can be made. A lumbar abscess at the outset is a simple sac, without any complicated pouches, but as it gets older, the pus sometimes burrows to far distant parts, greatly increasing the difficulty of exploration and of disinfection and drainage.

The steps of the operation vary with the locality. Where the abscess points behind in the lumbar region, the following anatomical arrangement almost always exists: The original sac is inside the body, but behind the peritoneum. A small orifice at the outer border of the common mass of the *erectores spinæ* muscles conducts the pus outward to another broad sac which expands beneath the integuments. This double arrangement is an effectual barrier to any efforts to disinfect the abscess by antiseptic injections thrown merely into the outer sac. The great interior fountain itself must be opened, explored and tubed. The first step is to open the external sac widely. The second is to examine the floor of the cavity with the finger, and if necessary with a large probe, until we find the opening leading to the interior sac, which orifice is usually in the groove just outside the border of the common mass of erector muscles, but sometimes lies in the angle where the crest of the ilium approaches the spine. These openings vary in size from an eighth of an inch to three-quarters of an inch in diameter. Dilating the orifice, with the aid of an incision if necessary, the finger is inserted to examine the interior. Passing inward the spinal column can be examined to search for necrosed portions, or for excavations whence sequestra have previously exfoliated. In the lower parts of the sac pieces of the exfoliated bone are sometimes found. Passing upward beneath the ribs one often finds the kidney lifted out of its bed, and pressed forward with other tissues. Still higher the sac may terminate in a rounded pouch behind the liver, or extend upward behind the edge of the diaphragm, requiring a long bent probe to complete the examination. Below, it may terminate in a rounded hollow, or extend down into one or both iliac *fossæ*, or passing into the lesser pelvis make its escape by the sciatic notch into the thigh. Still oftener it burrows beneath Poupart's ligament into the front of the thigh. Probes and flexible bougies are valuable in tracing extended channels, but the touch of the finger is indispensable in exploring the short pouches, and in finding the entrances to the longer ones.

When the abscess points in the angle between the crest of the ilium and the spinal column a wide opening should be made into the external sac, and as before said, the narrow opening into the inner one must be enlarged. The finger then readily explores the cavity. Often it runs forward along the internal

[1] Read in the Section on Surgery at the Thirty-Seventh Annual Meeting of the American Medical Association.

iliac fossa towards Poupart's ligament, where another free opening must be made. At other times it runs upward behind the kidneys, and sometimes sends pouches in three or four directions.

When the abscess points above Poupart's ligament, it presses away the peritoneum so that there is usually no danger in opening it a little above the ligament and in front of the anterior superior spinous process of the ilium. If it opens below the ligament, a free incision must be made to admit the finger. If the finger is too short, or too large, a Brittania metal sound is bent to proper form and carried upward under the ligament, if possible. If the great length of the lower channel prevents this, we must cut down upon it just below the ligament, and pass the sound under it into the pelvic section, and then cut down upon it as before. The finger being introduced shows the size and form of the sac at that part. Next let the metallic sound, or what is often better, a flexible Mercier's *sonde coudée*, be used to trace the channel upward and backward into the lumbar region. If this is successfully accomplished, the next step is to turn the patient on his face or side and cut down upon the sound by an incision much like that of lumbar colotomy, only keeping more towards the spine and passing into the cavity through the groove along the external border of the common mass of erector muscles. The incision may be either longitudinal or transverse at pleasure. Motions of the sound made by an assistant will help the surgeon's finger to identify the exact position of the abscess, especially if the instrument be pretty large and firm. The finger should now be inserted into the lumbar cavity and made to search the whole interior exactly as in cases where the first pointing is in the lumbar region. Every opening must be tubed, and the cavities all be kept well disinfected. As the upper tube will take away the pus at its source, and prevent it flowing down to the lower cavities, the latter can be healed without difficulty, thus reducing the dangerous size and complexity of the cavern, and giving us a comparatively small and simple abscess to deal with.

The following cases from my own experience illustrate the subject:

Case 1.—A woman of middle age entered Mercy Hospital with a fluctuating tumor four inches in diameter on the right lumbar region. Coughing caused succussion as in hernia. The exploring needle brought out pus. The patient being anæsthetized, I incised the tumor freely and evacuated the fluid. The floor of the sac was on the external surface of the muscles of the trunk. In the groove along the external border of the common mass of the erector muscles, I found a hole about a quarter of an inch in diameter leading through the abdominal walls. Enlarging this with a bistoury I inserted my finger and found a large interior cavity, some seven inches long and three inches broad. The inner border was formed by the spinal column. The vertebræ were exactly normal in form, there was no naked nor ulcerated bone, and the bony surfaces were covered with a thin healthy periosteum. The upper end of the cavity was a rounded *cul-de-sac* behind the right lobe of the liver. The kidney and the ascending colon were lifted forward and inward by the pressure of the abscess. The inner surfaces of the lower ribs were examined and found healthy, and the lower end of the abscess was a simple *cul-de-sac*, like the upper. Neither the finger nor the probe could detect any diseased bone, nor any pouches or passages leading to other parts. It appeared to be purely an abscess in the cellular tissue, and though large, it was very simple in form. It was very thoroughly washed out with antiseptics, a large drainage-tube inserted, and the patient under daily antiseptic injections and dressings rapidly improved in health, and is now nearly well.

Case 2.—A married woman, aged about 33 years. She had a fistulous orifice in the right lumbar region, which had been discharging several months. Potts' disease caused by a fall existed with protuberance of the second lumbar vertebra. She was thin, rather weak and very nervous, but able to keep about the house. Ether was given and the patient placed on the left side, and a free opening made through the skin. The outer sac was found to be small. The opening from the outer to the inner sac was about a third of an inch in diameter. This was enlarged, and the finger inserted. The inner cavity was ovoid in form, about six inches in length and two and a half inches in breadth. Two small pieces of bone lay loose within it, and several others had previously been discharged. The affected vertebra lay directly opposite the opening and was easily examined with the finger. The periosteum was thickened and the form of the body of the bone somewhat changed by the effusion of provisional callus, as well as that of the vertebra below. On the side of the body of the bone was a concave excavation like the bowl of a teaspoon, but there was no longer any naked ulceration of bone to be felt. Apparently the ulcer was healed, and a smooth periosteum lined the hollow. Neither the finger nor the probe succeeded in touching carious bone anywhere. Apparently the caries had become spontaneously cured and only the abscess with the two loose pieces in it remained. These were extracted, a large drainage-tube was inserted, and antiseptic injections regularly kept up. The patient did well as long as she remained within reach of observation, but I lost sight of her, and do not know her present condition.

Case 3.—A boy aged 7 years, much emaciated and weak. A bad Potts' disease existed at about the first lumbar vertebra, with very great deformity. A lumbar abscess pointed on the left side behind. I aspirated the tumor about three times, in hopes to obtain one of the cures which sometimes reward this method of treatment. After the last aspiration, the pus ulcerated its way out along the track of the puncture. Knowing very well the disasters impending from sepsis unless met by prompt measures, I anæsthetized the patient and opened the external sac, which was about three inches across. The opening to the inner sac lay in the usual position alongside the common mass of the erector muscles, and was over half an inch in diameter. The inner sac was very large, some parts being beyond the reach of the finger. This being my first case of digital exploration of lumbar abscess, I was more timid than

I am now, and did not examine the bodies of the vertebræ, but withdrew my finger, inserted a large drainage-tube, and instituted a daily wash-out with a 2½ per cent. solution of carbolic acid. No hectic followed; on the contrary the patient gained greatly in health and strength, and was obviously relieved of a deadly depressing influence. As the patient lived at a distance, I did not learn the subsequent history, and do not know whether the antiseptic measures were steadily followed up, but so long as kept under observation, the improvement in his condition was immense.

Case 4.—An exceedingly complex case. The patient was an adult male aged about 42 years. He came from a distance with the belief that he had a hip disease with an abscess pointing on the outer side of the left thigh. It was a remarkable instance of a lumbar abscess burrowing a long distance, and requiring several openings to explore and disinfect the cavity. The external tests, such as rotation of the femur, etc., failed to prove any true hip disease, but I found, much to the patient's surprise, a moderate but perfectly distinct Potts' disease with the usual deformity affecting the ninth dorsal vertebra. There was a small contracted fistula yielding only a slight discharge at the angle where the crest of the ilium approaches the spine. On the middle of the outer side of the thigh there was a large fluctuating tumor some six inches in diameter.

Having anæsthetized the patient, I opened the tumor freely and evacuated the pus. It extended upward and backward far beyond the reach of the finger, but a long probe traced the cavity through the sciatic notch, and into the pelvis, where its crookedness prevented further progress of the instrument. I now passed a director into the small fistula above the crest of the ilium, opening the external sac, which was very small, as was also the opening leading to the inner sac. Enlarging the orifice the finger was inserted, and three channels were found, one leading downward through the pelvis towards the sciatic notch, and thence out of the notch and down to the abscess on the thigh; the second led forward into the iliac fossa and terminated near the anterior superior spinous process of the ilium. I opened this widely above Poupart's ligament, and was able by putting an index finger in to touch the index of the other hand inserted at the posterior opening. The peritoneum seemed thickened and firm, making a strong barrier between the fingers and the intestines. The third channel was rather small, and led directly upward along the psoas muscle, and behind the kidney. I inserted a finger and cut down upon it just below the twelfth rib, where, inserting a probe, I traced the abscess still onward behind the diaphragm towards the body of the deformed ninth dorsal vertebra. All the cavities were tubed and disinfected and treated with daily antiseptic injections.

Doubtless by exsecting about two inches of the shafts of the ninth and tenth ribs, the finger could have been inserted directly upon the carious body of the affected vertebra, and perhaps a successful scooping of the bone effected, but I desisted for these reasons: Across the body of each dorsal vertebra winds a pretty large intercostal artery, whose ligation in such a locality would be rather difficult. I judged it best, therefore, to try every other measure, before encountering this danger. I have proved by abundant experience that a daily irrigation of a weak solution of muriatic acid conveyed through a catheter close to a carious bone will often completely dissolve the dead osseous tissue in a moderate time, and effect a permanent cure. Having therefore provided a route by which this plan could be put in operation, the patient returned to his home with a letter of advice to his physician counseling that measure, as well as the regular disinfection of the channels below. No shock or hectic fever followed the operation, and at the last advices the patient was steadily improving.

Case 5.—A boy 5 years of age with Potts' disease causing decided projection of the tenth dorsal vertebra. He was much exhausted, and unable to walk about the room. An abscess was pointing on the right lumbar region. Being freely opened under anæsthesia the external sac was found to be about three and a quarter inches across. The opening leading to the inner sac was in the usual location at the outer border of the erector muscle, and was of a size barely sufficient to admit a pencil. Enlarging it partly by notching with a bistoury and partly by dilatation with the finger, the index was freely inserted. The inner sac was smaller than the external. A prolongation extended to the affected vertebra, but neither the finger nor the probe after a very careful search could detect any really naked or carious bone. The cavity was disinfected, a large drainage-tube inserted, and daily injections of antiseptics instituted. A spinal brace was applied, and the patient returned to his home and to the care of a skilful family physician. He progressed well. No hectic nor septicæmia occurred. The discharge diminished to a mere trifle, the patient became fat and strong, and the spinal inflammation disappeared so as to allow of free and active motions without pain. Several months have now elapsed and the tube is still kept in as a matter of prudence, but the child runs freely about the house, and has grown so tall as to necessitate a new spinal brace.

Case 6.—This is an instance of an abscess breaking in the lumbar region; though really iliac in its origin. The patient is a woman aged about 26. Hereditary syphilis was suspected in the case, but not proved. Some months prior to my visit an abscess pointed and broke in the left lumbar region in the angle between the ilium and the spinal column, and discharged freely. She fell into hectic fever, which, however, subsided after a time. At the time of my visit there was no fever and the discharge was small, but the patient was very thin and feeble. Opening the outer sac, I found a small orifice leading to the inner cavity, which I enlarged and inserted my finger to explore the interior. To my surprise I found no lumbar cavity, but an elongated and irregular sac lying in the iliac fossa and reaching nearly to the anterior superior spinous process. The cavity was tubed and disinfected, and placed under full antiseptic treatment, in the hands of a skilled family physician. She improved in all respects and continued to

gain for two months, when inflammation occurred to some extent near the anterior superior spinous process of the ilium, which is doubtless due to the anterior portion of the abscess sac being imperfectly drained and disinfected. I judge that complete success will require an anterior opening, as well as a posterior one.

Case 7.—Male, æt. 36. No evidence of Potts' disease present. A tumor gradually formed in the right iliac fossa, extending laterally further than is usual in perityphlitis, as it could be felt above the crest of the ilium. Fluctuation was very evident above the outer third of Poupart's ligament, and upward to the anterior superior spinous process of the ilium.

I anæsthetized the patient, opened the sac freely and evacuated the pus. The peritoneum was already pushed well aside by the pressure of the abscess, so as to require no special care. A very large reservoir of pus occupied the iliac fossa, but the finger detected no caries of the ilium. The upper and posterior part extended beyond the reach of the finger, but a flexible metal sound passed readily into the lumbar region to a distance proved by measurement to reach above the kidney. The sound was left in this position and the patient turned on his side. I then made an incision in the groove along the outer border of the common erector mass of muscles, and dissected down to the sound. Inserting the finger, I found that the cavity extended well up behind the kidney, but was much narrower than that in the iliac fossa. No other prolongations were discovered, and the patient did well at first. However, in a short time a hard inflammatory swelling appeared in the iliac fossa of the opposite side of the body. The temperature rose, and the patient fell into delirium. The swelling increased in size, but presented no fluctuation. However, after a little delay I opened it above Poupart's ligament and found deep in, and covered with a thick mass of inflammatory deposit, a large cavity of putrid pus, which was evacuated, and the cavity tubed and disinfected.

A day or two later the old channel of communication from the original abscess to this one, which seemed to have become blocked by the swelling or clots, re-opened, so that injections could be thrown across from one iliac abscess to the other. The delirium continued and the patient died of a cerebral attack caused, probably, by septicæmia.

I look upon this not so much a failure of the principle of the operation, as an instance showing the danger and folly of postponing it until long passages have burrowed into distant parts, and the whole system become poisoned with septic absorption. It is obvious that the operation should be made at the earliest possible period.

Case 8.—A young woman with no evidence of Potts' disease. She had a large abscess pointing above the outer part of Poupart's ligament. On opening and exploring, I traced it upward and backward to the angle between the crest of the ilium and the spine, where I made a counter opening and instituted free drainage and injections to be thrown through from one opening to the other. I believe the patient did well, but as she lived at a great distance I soon lost sight of the case.

Case 9.—A woman with no clear proof of Potts' disease. She was able to take the journey to the city, but was considerably exhausted from a lumbar abscess which had been discharging just above the groin for months. I opened freely both above Poupart's ligament and in the lower end of the lumbar region behind. Large drainage tubes were deeply inserted, and copious carbolized injections daily thrown through from one wound to the other. The patient began to return towards health at once. She grew daily stronger and plumper, and when last heard of some months later she was almost restored to soundness, though still wearing the tubes for safety.

The following list of opinions shows the contradictory and confused state of thought on the opening of these cavities:

The elder Gross left on record his opinion that lumbar abscesses, especially old ones, should not be opened until about ready to burst.

Prof. D. Hayes Agnew expresses views nearly similar (Agnew's Surgery, vol. II, p. 884).

Alex. Shaw, of England, discourages opening the cavities, but still hopes something from Listerism.

Mr. Treves, of London, at first advocated only repeated aspirations, but later has published three cases of digital exploration, with favorable results. In one of them he removed a piece of necrosed bone.

Erichsen, of London, advises antiseptic opening, and even suggests digital exploration, but does not speak of having tried it.

König, of Germany, advocates drainage in a downward direction, but omits to speak of antiseptic cleansing.

Holmes, of England, advises to allow the abscess to burst spontaneously, and on no account to open it.

Ashhurst, of Philadelphia, opposes opening.

Bryant, of Guy's Hospital, London, advises not to open early, but if the abscess progresses, to open antiseptically.

Hamilton, of New York, remarks on the contradictory state of surgical opinion, and evidently hesitates. On the whole, he advises to evacuate gradually, and never to use probes, tents, or injections, until the opening has been running several weeks.

I am led to the following conclusions by a pretty extensive experience in various methods which have been in vogue:

1. Some lumbar abscesses recover simply by a series of aspirations, with or without antiseptic washing out. This method is simple, and where the choice offers itself should be tested first.

2. If the aspiration plan fails, or is inapplicable in consequence of the abscess being already open, then free incision, exploration, and complete disinfection should be carried out at once.

3. If residual abscesses appear in the course of the treatment, they should be served in the same way as the primary one.

4. The sudden evacuation of a large cavity filled with pus, provided the sac is immediately disinfected

and kept so, has none of the dangers supposed by the old authors to beset the case.

Dr. Byrd, of Quincy, Ill., in discussing the paper, spoke of the value of per-oxide of hydrogen.

Dr. Fenger, of Chicago, suggested that the danger in opening psoas abscesses was to be found in the character of the abscess, the result of tubercular abscesses being much worse than a simple psoas abscess; that the value of the treatment suggested by Dr. Andrews consisted in the fact that he made his counter openings near the origin of the trouble.

Dr. Lewis, of Kansas City, inquired concerning the earlier symptoms of psoas abscess.

Dr. Hamilton, of Ohio, thought it strange that such large accumulations of pus existed without being detected by the physician.

Dr. J. Ransohoff, of Cincinnati, believed that such abscesses should be drained after free incision if not arising from tubercular processes. Abscesses of tubercular origin he thought were unfavorably influenced by incision. The origin of the trouble was to be sought before determining the character of treatment.

Dr. Andrews, in closing, said that the symptoms of such condition where caries was present consisted in elevation of temperature, some fulness or swelling, dulness in percussion at site of tumor, and the possible use of aspirator. That the incision should be carried to the extent of a thorough exploration of the cavity seeking for dead bone, providing for thorough drainage and antiseptic cleansing. That he had opened abscesses where spicula of bone were found in the cavity, but where the neurotic process had already been limited and the parts were healing.

A REMARKABLE CASE OF FOREIGN BODY CARRIED TEN YEARS IN THE EYE.[1]

BY T. E. MURRELL, M.D.,
OF LITTLE ROCK, ARK.

A student in the Canehill College, Arkansas, session of 1875–76, was making some hydrogen gas with iron filings and sulphuric acid in a glass retort. Just as the gas began to escape from the retort pipe, and while still much mixed with atmospheric air, he chanced to bring a lighted match close to the escape pipe, when an explosion took place. The retort was blown to atoms and the pieces of glass driven with great force in all directions. The young man received a severe wound in his right eye. The eye was found lacerated; a transverse cut in the cornea extending from the sclera on one side into the sclera on the opposite side. The supposition was that a flying fragment of glass had done the work by an oblique stroke and had passed on.

The eye was treated antiphlogistically, and although considerable inflammation and pain followed, in a few weeks all became quiet and a transverse corneal scar marked the seat of injury. Some six years after this Mr. F., then a lawyer, consulted me. I found right eye as follows: Extending some two lines into the sclera inwardly and outwardly and transversely through the diameter of the cornea was a somewhat flattened linear cicatrix, into which the iris was drawn with obliteration of the pupil. Above and below was clear cornea through which could be seen fairly normal fibrillated iris. The scleral conjunctiva was of normal appearance, the eye appearing perfectly quiescent. He had had no trouble with it since the recovery from the accident, and came to me for the purpose of having an artificial pupil made for optical purposes. I found, however, that he had no perception of light, and explained to him the uselessness of such procedure. Taking into consideration the extent of the wound, involving as it did the ciliary body on two opposite sides, together with the fact that the iris was also extensively incarcerated, I warned him particularly of the dangers of sympathetic trouble in the other eye eventually.

Some two years ago Mr. F. again visited me. I found the eye *in statu quo*, with no redness, pain or irritation, or weakness of his left eye. I repeated my injunctions of caution, and now, upon conservative principles, advised enucleation of the injured eye. He returned home and occasionally wrote me, stating that he was afraid, since my information imparted to him of the dangers of sympathetic trouble, to carry the eye, and would at his convenience come and have it removed.

In February last he came with his mind made up to have the operation performed. At this time the scleral conjunctiva was perfectly clear, there was no tenderness over any part of the ciliary body, no pain, and the other eye was clear, strong, and V = Sn $\frac{20}{15}$ sharp. He was a hard student, and up to this time had spent many hours daily in close application to his law books. He said, however, for a year or two, his good eye showed more disposition to tire than formerly after much work, and concluded that one of the symptoms of sympathetic irritation was upon him.

I put a drop or two of cocaine muriate solution, 4 per cent., into the conjunctival sac, and in a minute after injected 10 minims of the same into the circumscleral tissues at four points. Five minutes later I proceeded to enucleate in the usual way, which was entirely painless, the patient and I carrying on a pleasant conversation all the while. When finished and the hæmorrhage staunched, I examined the eye in his presence. He asked me to look carefully for a piece of glass, as he could not but believe some fragment had lodged in the eye. I was disposed to make light of his opinion, and stated as my reason, the entire absence of irritation of any sort in the eye, which would hardly have been the case with so irritating a body as a piece of glass lodged in the eye. The eye was divided into halves through its equator. In the interciliary region, occupying the position of the lens, was a mass of lymph. The other structures of the uveal tract, I should say, were entirely atrophic, and the vitreous chamber filled with straw-colored water. On opening into the lymph deposit the knife came upon a hard body which, on further exposure, proved

[1] Read in the Section on Ophthalmology, Otology and Laryngology at the Thirty-Seventh Annual Meeting of the American Medical Association.

to be glass. The encystment was complete. The glass measures 15 millimetres long, 12 millimetres wide and 1½ millimetres thick, and is a parallelogram with one corner broken off. Its position was in a vertical plane parallel with the iris, and fully as large as the whole iritic surface.

The complete encystment of so large a body, with such sharp cutting edges, exactly in the ciliary region of the eye, with such extensive involvement of the ciliary body and incarceration o. the iris, with entire absence of tenderness, pain or redness of the eye at any time, taken together, serve, in my opinion, to mark this case as one unique and worthy of record.

SOME PRACTICAL SUGGESTIONS ON THE TREATMENT OF DIPHTHERIA.[1]

BY WM. PORTER, M.D.,

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Diphtheria is a common disease, and it is one of the most fatal. As one illustration of many, in five years there were 17,193 cases in New York alone and 7,263 deaths. It is a disease that every physician will be called to treat sooner or later, and being called must act promptly. This is not the place for a long essay upon the different theories of diphtheritic contagion and progress; rather let us enter at once upon the discussion of the practical questions involved in conducting the disease to a favorable issue.

Let me very briefly sketch the manner of invasion according to conclusions which seem most reasonable and are by many accepted:

1. Diphtheria is contagious—or rather portagious, and of parasitic origin.

2. It is most readily implanted upon a mucous membrane denuded of its epithelium.

3. It is probably always local in its incipiency, sometimes becoming rapidly systemic, though in rare cases apparently systemic from the beginning.

To further explain rather than to argue these propositions, let me say that the best protection against diphtheria is a mucous membrane entirely healthy; and an ordinary acute or subacute laryngitis or pharyngitis is a condition favorable to the implanting of the diphtheritic germ. When the epithelial layer is intact the diphtheritic germ finds no foothold, but when there is an abrasion or denudation of the lining membrane the diphtheritic bacteria first attach themselves to the surface so prepared for them. This is the local period of the disease and no micrococci are found in the blood—there is no constitutional symptom. Sometimes, though there may be rapid surface involvement, and free formation of the characteristic membrane, there may still be little absorption of the diphtheritic virus.

Many of these almost purely local conditions suggest a doubt as to their specific nature. It is well to give the patient the benefit of the doubt and to treat urgently all suspicious-looking exudations upon the surface of the respiratory tract. Practically, a certain number of cases of diphtheria are constitutional from the beginning, the point of infection being in some recess of the naso-pharynx or larynx, and easily overlooked—or is beyond the range of vision. I am not sure but that infection may occur from primary invasion of the membrane of the alimentary canal. Klebs in the second Congress of the German Physicians, speaks of a diphtheritic involvement of Peyer's patches resembling the reticular appearance in the early stages of typhoid. In by far the greater number of cases the rapid multiplication of the bacteria—whether sphero-bacteria as are found in severe cases, or whether short and slender rods as in milder cases—produces an inflammation of the mucous membrane, exudation takes place, the epithelial cells die and the bacteria pass into the blood and rapidly multiply throughout the circulation. Even should we deny with Beale, that the contagium is bacteria, we still must admit that the hypothesis of local infection furnishes the most rational explanation of the sequence of symptoms.

Granting this, we have two purposes in treatment in the early stages of diphtheria:

1. To destroy or render harmless the local manifestation of the disease.

2. To increase the power of resistance in the general system to infection.

In dealing with the false membrane all measures which would tend to irritate or injure the air passages should be avoided. There should be no tearing away of the exudation, or application of caustics—nor do I think that, except in cases where there is only a small well-defined patch of membrane, the use of the galvano-cautery will prove expedient. To prevent absorption, not only should we avoid making new abrasions in the throat, but I have thought it wise as far as possible to cover up those that already exist.

First of all it is well to remove from the naso-pharynx, or pharynx, if that be the site of invasion, whatever of accumulated mucus and *débris* there may be. This may be readily done by means of a small syringe, and a weak solution of salt water or of Listerine. This may be used either through the nostril or directly in the pharynx. To loosen the attachments and hasten the resolution of the diphtheritic membrane many means have been advocated.

When the patch can be reached a solution of papayotin may be applied; or better still, one of trypsin. This last used in solution, as suggested by Fairchild and Foster, or still better, a few grains with one or two of bicarbonate of soda, made into a paste with water and spread upon the diphtheritic patch, is the most rapid solvent I have known. If the local disease is beyond the reach of such an application, an alkaline solution of trypsin may be sprayed into the nose or larynx.

After several applications of trypsin within the hour, a still further attack may be made upon the local disease. Having used more or less freely most of the germicides, astringents and antiseptics commended in the treatment of diphtheria, I have abandoned all else for a solution of equal parts of the tincture of the chloride of iron and glycerine. I have cause to consider this, when well applied over

[1] Read in the Section on Laryngology, at the Thirty-Seventh Annual Meeting of the American Medical Association.

the entire extent of the diseased surface, an almost complete bar to the progress and absorption of the diphtheritic virus.

1. If the potency of the disease lies in the rapid multiplication of bacteria, so strong a chlorine solution is certainly indicated.

2. If absorption takes place through the abraded surfaces and "mouths of lymphatics open," as stated by Oertel, we would from *a priori* reasoning expect some good from the local use of iron, while the glycerine may be something more than a mere vehicle, in that it may by affinity relieve to some extent the turgid capillaries of the mucous membrane. The application should be made frequently.

Let me say, in urging the efficacy of this agent, that for two years I have not seen a case of diphtheria die where the whole of the false membrane could be seen and repeatedly covered with this solution and where appropriate general treatment was given. Thrice within the last week and many times during the past year I have seen the characteristic membrane shrivel up and become detached under the influence of the iron and glycerine.

When the local attack is out of reach of the direct application by means of the brush or, better still, the cotton covered probe, the case is very different. When the invasion is in the naso-pharynx or in the larynx the result may well be dreaded. Even in such instances I believe the best procedure is to apply the iron locally by spray and where possible by the cotton covered probe.

The covering in of the diphtheritic patch with tolu varnish as recommended by Mackenzie may follow the thorough use of the iron solution, and is doubtless protective.

Not only is local treatment important, but it is important to institute it early. The physician should be called at once in every case where there is a doubt. Parents should feel that they are responsible for delay, and that delay is exceedingly dangerous. Many cases that during the first twenty-four hours are easy to treat and curable, are a little later beyond the reach of the most skilful.

A few words as to general treatment. Here too I have no sympathy with halfway measures. First of all in every case, I nearly always counsel the administration of enough of calomel and soda combined to thoroughly evacuate the alimentary tract. It empties the canal of any accumulated material, it stimulates important secretions, and with Ritter, though not to the extent to which he advocates it, I believe it has a favorable influence upon the general condition. At least it clears the decks for action. As soon as the bowels of the child have been well moved, and sometimes not waiting for that, the internal use of the iron and glycerine solution (the same as that used in the throat) may be begun; for we need not fear any chemical reaction. To show that others are falling back upon this well-known agent let me quote from an editorial in a recent issue of the *New England Medical Monthly*: "It is interesting and somewhat gratifying to note that after each excursion into the domain of experimental medicine the profession invariably returns to the older and more effective method of treating diphtheria which consists of tonic doses of the tincture of iron and a system of extreme nourishment."

To anticipate and antagonize general invasion the general as well as the local treatment should be instituted early. Where the symptoms demand I prescribe two drops of the iron and glycerine solution for each year of the child's age, in a little water every two hours, and midway between each dose the diphtheritic patch is to be touched or sprayed with the solution. Thus there is an opportunity for the ferric solution to be brought in contact every hour with so much of the diseased membrane as is in the pharynx.

I have not discussed much of the poly-treatment of diphtheria as practised to-day—nor have I time to outline the emergencies which may arise, as I had thought of doing. My object has been to propose a plain and direct method of treatment which any one may use and which is not an experiment.

Many other remedies are often to be added. Pilocarpine, when the skin is dry and there is spasmodic laryngeal contraction; quinine, when the fever is excessive; steam from slacking lime when respiration is labored and the respiratory tract dry; and tracheotomy or intubation when the larynx is greatly obstructed.

Let me in conclusion suggest that the physician demand of the people among whom he practices, that they call him at once when suspicious symptoms are observed, and that he answer quickly, act promptly, and see that his instructions are implicitly obeyed. To treat diphtheria is to fight a battle—there should be no delays, surprises nor compromises.

DOUBLE PYONEPHROSIS;

Perineal Median Urethrotomy; Removal of large quantity of Sandy Gravel; Dilatation of Ureters; Hypertrophy of Bladder; Death.

BY EDWARD HORNIBROOK, M.D.,
OF CHEROKEE, IOWA.

N. B. Batterson, æt. 51, consulted me July 17, 1881, and gave the following history: Ancestors for several generations long-lived and healthy. He enjoyed good health till ten years ago. He then had retention of urine brought on by heavy lifting? The physician in attendance retained gum-elastic catheter for eight days. At the end of that time the patient passed large quantities of blood. He says that this was after, not before removal of catheter. He has had constant vesical irritation since. Pus and mucus passed daily for first four years. He was then free from purulent or bloody urine for eighteen months. For last two and a half years he has been passing bloody urine and pus at frequent intervals. Hæmaturia has always occurred after lifting heavy weights, which he was often required to do in his employment as a grocer's clerk. Requires to urinate every half-hour, night and day. The symptoms were not relieved by recumbent posture. He has had frequent symptoms of a calculus passing through urethra, but never saw any. After these symptoms he often passes

large lumps of hardened mucus? Has not passed catheter for last two years. Bowels constipated and passages painful. Prostate gland enlarged and tender. Catheter passes easily; but there are two slight strictures in membranous portion of urethra. Urine drawn by catheter alkaline in reaction and mixed with pus. No stone in bladder.

Under treatment, principally with the dilute mineral acids, benzoic acid and rectal suppositories, his condition was ameliorated until May 12, 1885. He then complained of the usual symptoms of vesical calculus. I readily detected stone and advised operation. Very offensive pus escaped during the examination. After repeated trials I failed to grasp the stone with the lithotrite. It was of large size and placed just above and behind the neck of the bladder, apparently lodged in a pouch from which it could not be removed. He suffered little during the attempt; there was no shock and he seemed well as usual next day. I recommended lithotomy, but the patient refused to consent to the operation.

He passed from observation until October 12, when he sent for me and urged me to undertake the operation, as his health was giving way under his constant suffering. I reluctantly consented, as the urine was then strongly alkaline, contained large quantities of pus and was horribly offensive.

On October 20, in the presence and with the assistance of several of my professional confrères, I performed the operation according to Allerton's method. After dilating the prostate I introduced the scoop to dislodge the stone from the pouch in which I thought it to be imbedded, when it crumbled into small crystals. Upon passing my finger into the bladder the whole mucous membrane seemed covered with an incrustation of this sandy gravel which I was unable to remove without removing the mucous membrane with it. I removed what I could with the scoop and irrigated the mucous membrane thoroughly with a strong stream of carbolized water. By these means more than two ounces of this sandy gravel were removed. Shreds of mucous membrane were also washed away.

I retained a tube in the wound with the intention of practising daily irrigation. The next day the bladder was washed out till the water came away clear. After a few minutes nearly an ounce of fetid pus followed. This convinced me that the pus was discharging from the kidneys, and added to the gravity of the prognosis.

The washing out of the bladder was continued till November 9, when he sank exhausted. He suffered less after the operation than before.

A post-mortem examination was made twelve hours after death by Drs. Sherman, Vail and Burlingame, who kindly removed the bladder, kidneys and ureters for my inspection; as I was away from home at the time. The walls of the bladder were an inch in thickness; the ureters both dilated so that they were at least three-quarters of an inch in diameter; and there was about three ounces of pus in each kidney and its ureter.

Many questions, of course, suggest themselves as to the etiology, the course of the disease and the cause of the pathological conditions. I will not attempt to theorize but merely state the facts, leaving each reader to make his own deductions.

COLLECTIVE INVESTIGATION OF DISEASE.[1]

BY H. Z. GILL, M.D., LL.D.,
OF CLEVELAND, OHIO.

In making a report under the title of "Collective Investigation of Disease" for the city and vicinity of Cleveland, O., it has been necessary to collect the meteorological conditions and then examine carefully the daily death-records of the city. This material has been made a part of this report, in order that every one may re-examine it respecting the same diseases, or may use the data for other purposes.

The first step, after the appointment of your committee, was to ascertain the daily meteorological changes for the year to be reported. This could be done more accurately at the signal office at this station than anywhere else; hence, application was made to the Bureau at Washington for the data, and also for the ozonic conditions of the atmosphere. In reply to the latter part of the request (the other items having been ordered), I received the following reply:

"CLEVELAND, O.

"I would respectly state for your information that the Signal Office in Washington does not furnish any Station with ozone-paper and color scale for the purpose of determining the ozonic condition of the atmosphere.

(Signed) WILLIAM LINE,
Sergt. Signal Corps U. S. A."

The state of the barometer, the thermometer, the dew-point, direction of wind, amount of precipitation and state of weather as to cloudiness, were furnished promptly. Credit is due and thanks for the same are hereby acknowledged.

This report covers a period of one year, viz., from May, 1885 to April, 1886, inclusive.

The city of Cleveland, O., is situated in N. latitude 41° 30′; W. longitude 81° 27′; and has an elevation of 690 feet. The soil is generally sandy, and through it percolation is easily effected; hence it has been found best to abandon wells in the more central portion of the city, especially so since the water-supply from the lake is pure and abundant. The city is not generally densely built, and little danger from over-crowding is feared when compared with many of the large cities of this country. Allowing the population to be as estimated, 205,000, and the mortality, as given by the Annual Report of the Health Department of the city for 1884, as 3730 (or including still-births, as 4049), the mortality would be 18.17 and 19.75, respectively, per 1000;[2] while that of the United States for 1880 was estimated at a fraction over 18 per 1000.

Our investigations have had reference, mainly, to those diseases which are believed to be more or less influenced by atmospheric conditions, viz.: Diph-

[1] A report made to the Ohio State Medical Society, June 2, 1886.
[2] For 1885 it was 17.43 and 19, respectively.

theria and croup, cholera infantum, entero-colitis, and other diseases of this class; typhoid fever, measles, scarlet fever, and whooping-cough.

During the calendar year 1884 there were deaths: From diphtheria and croup....196; my report, 180
" cholera infantum.....278 " " 313
" measles.....197 " " 6
" scarlet fever..... 18 " " 24
" typhoid fever.....121 " " 78
" whooping-cough..... 37 " " 30

Columbus, O., had of cholera infantum for 1885 (July, August, September), 40 deaths; the maximum temperature having been 96.7° on July 20.

From the same yearly report of Cleveland, there were 1239 deaths from zymotic diseases, of which 847 were from the above-named six diseases; for 1885 there were 1016. My examination for the year (May, 1885, to April, 1886, inclusive) shows a total mortality of 4081. The first in the list—diphtheria and croup—gives a total of 180, distributed through the year as follows:

May....8, (21)[1]...Sept., 10, (27)....Jan., 15, (22)
June....9, (34)...Oct., 22, (45)....Feb., 6, (16)
July...11, (33)...Nov., 24, (47)...Mar., 20, (29)
Aug... 9, (28)...Dec., 26, (44)...Apr., 29, (24)

This shows 380 cases reported, giving a mortality of 47.36 per cent., a rather high ratio considering the absence of an epidemic.

We cannot say that atmospheric conditions, as shown by these meteorological tables, had any notable influence on this death-rate, not over four in one day (Nov. 28 and Dec. 15) having been recorded during the year. On those days respectively the atmospheric conditions were:

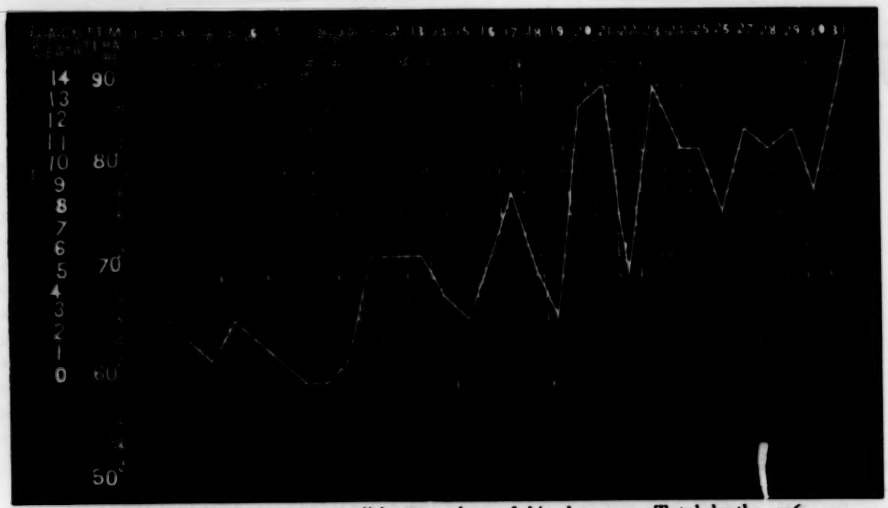
	Mean barom.	Mean temp.	Dew-point.	Wind.	Precipitation.
Nov. 28—30.260		28.3	23.0	S.W.,	0
Dec. 15—30.119		24.0	16.9	S.W.,	0

The number of cases and deaths reported are so distributed through the year as to show only the usual fact, that the first three and the last three months of the calendar year are those in which the disease occurs most frequently, viz., 208 cases, 113 deaths; the whole number being, 380 cases, 180 deaths—47.3 per cent.

No doubt many cases of mild form were not reported. This is in accord with a large table, in my work on Diphtheria, now in press, of 7019 cases of croup in the Hospitals of Paris, admitted from 1868 to 1880, viz.: September, 457, October, 500, June 517, all the other months having a higher number.

There are, however, conditions during this winter period of the year which may not pass unobserved; these are, the lower temperature, a less amount of ventilation, and crowding; hence, concentration of the poison, prolonged activity of the contagium, etc. We had occasion to bring these conditions to the notice of the profession fifteen or more years ago, when referring to some of the contagious diseases, especially variola, in which it was pointed out that concentration of the active agent, arising from a more defective ventilation and a lower temperature, were conditions favoring the spread of smallpox, scarlet fever and diphtheria. I say conditions—this it is which we are considering more particularly. With this disease we might consider the other contagious

CHART NO. 1.



Cholera infantum, 154; entero-colitis, 13; others of this class, 39. Total deaths, 206.

[1] Numbers in parentheses indicate the number of *cases* reported to the health office.

diseases; but in the order of our report *cholera infantum* and *kindred diseases* come next.

During the year reported, there were *among children, from these diseases alone*, 518 deaths, of which the alarming number of 428 occurred during July, August and September, 375 of them in the former two months. On one day, July 31, 16 are recorded; of cholera infantum alone, 13. If all were recorded in this class which I think belong to it, there would be in these three months at least 450 deaths, viz:

Cholera infantum,	296
Entero-colitis,	64
Others of this class (see table No. 1),	68
Additional cases (under head of "remarks")	22
Total,	450

A ratio of over 11 per cent. of the annual mortality of the city.

On the 17th of July the maximum temperature was over 90°. On the Thursday after this the daily mortality rose to 13, and continued high for several weeks. (See Chart No. 1.) On the day of greatest mortality, July 31, the meteorological report is:

Mean barom., 29.920; mean tem., 73.6; m. rel. humid., 92.3; wind, N.; weather, clear; precip., 0.

The latter half of July had a high average temperature, 2.3° above the mean for the past three years; and a high dew-point, yet very little rain-fall. For the month of August the mean temperature was six degrees lower here than in July, and the death rate from cholera infantum alone fell off nearly one-third, the mean temperature being 65.8°; while at Columbus it was 70°, with a higher mortality from cholera infantum than in July. Compared with corresponding months of 1884, there are some facts worth noting, if anyone could be incredulous on the relationship of temperature, etc., and diseases of this class:

DEATHS FROM CHOLERA INFANTUM.

		Mean temp.	Deaths			Mean temp.	Deaths
June,	1884,	68.5°	7	June,	1885,	64.5°	3
July,	"	69.0	73	July,	"	71.6	154
Aug.,	"	68.2	102	Aug.,	"	65.8	115
Sept.	"	67.3	65	Sept.,	"	61.6	27
		Mean barom.	Rel. humid.			Mean barom.	Rel. humid.
June,	"	30.052	69.3	June,	"	30.024	74.4
July,	"	29.893	66.6	July,	"	29.969	78.8
Aug.,	"	30.033	69.5	Aug.,	"	29.956	84.0
Sept.,	"	30.064	67.6	Sept.,	"	30.031	77.4

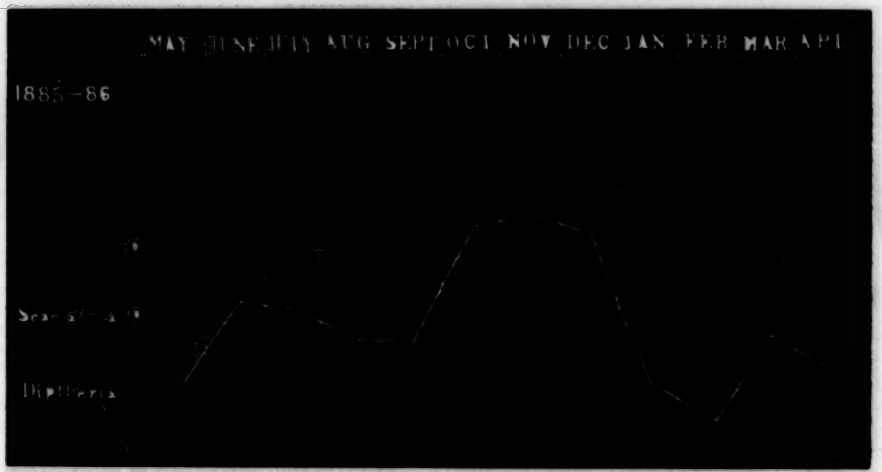
Chart No. 1, on preceding page, will give at a glance the relationship of temperature, dates and deaths for July, presented in a more apparent form, perhaps, than when in a table, the light line indicating the temperature daily, in its maximum and minimum, and the heavy line the daily mortality from cholera infantum and allied diseases in children.

This relationship shows indications for hygienic measures which we may not enter into at length at this moment.

Diphtheria and scarlet fever each has prevailed to quite a notable extent throughout the year. The latter furnished 510 cases, with a mortality of 24, a per cent. of 4.7. Deaths from measles have almost disappeared from the record, there being no death in seven of the months reported, and no *case* reported in three months of this time.

It is believed that the reports of cases of diphtheria, measles, and scarlet fever, made by the physicians of the city to the Board of Health are fairly correct as to numbers; many, however, of the very mild cases, I have no doubt, are overlooked or ne-

CHART NO. 2.—CONTAGIOUS DISEASES.



glected. Of course calculations are always made with this in mind.

The relationship of diphtheria and scarlet fever, as shown by Chart No. 2, is, we believe, more than accidental. In this year it is rather striking. The coexistence of epidemics of scarlatina, measles and diphtheria is pointed out in Sanné's work on Diphtheria, p. 324; but as before stated, we have no epidemic to report, and no special condition of atmosphere during this period in respect of dampness or otherwise.

During the months of February, March and April the deaths from acute pulmonary diseases were unusually frequent, viz., 33, 58, and 35, respectively. The meteorological conditions were:

Month.	Mean Barometer.	Mean Relative Humidity.	Mean Temperature.	Precipitation.	Wind.	Weath'r (Clear days.)
Feb'y,	30.093	79.5	25.4	1.55	S.	2
Mar.	29.964	79.1	34.9	2.00	W.	6
April,	30.061	76.2	49.1	1.78	N.E.	11

as influencing the temperature of the atmosphere of the region, or the additional degrees which arise from reflection, radiation, from the heat of cooking, or from whatever source.

Hygienic measures of every possible form and kind—food, clothing, bathing, ventilation, protection from exposure to the hot sun and from accidental heat, especially with quite young children, are strongly indicated. It would be out of place to enter at this time upon the medical treatment of any of these diseases. I may say, however, that at several times I have had printed *rules for the management of children during hot weather;* and have found that parents have been greatly aided by such printed directions.

The subjects of ill-ventilation, crowding of individuals in sleeping rooms, public halls and schools, have been hinted at under the remarks on contagious diseases. Not less than twelve years since I presented this subject under the general term of *dilution*. The same thought, varied a little, is now taking on the term or expression, attenuation. It is

CHART NO. 3.

1885 Months.	Mean Barometer.	Mean Temperature.	Mean Rel. Humidity.	Prevailing Wind.	Weather. Clear.	Fair.	Cloudy.	Precipitation.	Range of Temperature.	Total Deaths.	Diphtheria. Cases.	Deaths.	Croup.	Cholera Infantum.	Entero-Colitis.	Other diseases of this Class.	Total.	Typhoid Fever. Cases.	Deaths.	Measles. Cases.	Deaths.	Scarlet Fever. Cases.	Deaths.	Whooping-Cough.	Acute Lung Diseases.	Marasmus.
May	29.928	55.6	75.8	N.E.	6	11	14	3.88	47.4	296	21	5	3	3	4	4	11	..	4	9	2	23	5	1	16	..
June	30.024	64.5	74.4	S.E.	14	16		7.22	42.2	270	34	7	2	3	4	4	11	..	2	5	..	38	2	2	9	7
July	29.969	71.6	78.8	S.W.	15	15	1	4.48	37.1	514	33	8	3	154	13	39	206	..	2	10	..	35	2	1	7	11
August	29.956	65.8	84.0	N.E.	8	11	12	5.14	40.9	498	28	7	2	115	38	16	169	12	5	..	..	49	..	6	7	2
September	30.031	61.6	77.4	S.E.	11	12	7	2.01	40.3	333	27	5	5	27	13	13	53	4	8	..	..	55	4	2	10	9
October	29.971	50.2	81.9	S.W.	6	11	14	3.78	44.1	298	45	8	14	5	7	15	27	35	12	2	1	63	..	1	12	6
November	29.961	40.8	81.3	S.	2	6	22	4.67	46.2	268	47	13	11	3	3	2	8	15	10	2	..	48	1	..	13	7
December	30.050	31.5	80.3	W.		15	16	1.68	58.7	328	44	19	7	....	....	3	3	29	10	1	..	58	3	3	18	3
1886 January	30.032	23.1	83.0	W.	3	12	16	3.35	62.6	281	22	9	6	1	1	6	8	6	6	3	..	41	1	3	27	..
February	30.093	25.4	79.5	S.	2	17	9	1.55	62.5	287	16	1	5	1	....	6	7	7	5	3	..	29	..	8	33	..
March	29.964	34.9	79.1	W.	6	16	9	2.00	66.4	391	29	11	9	....	2	7	9	7	10	3	2	44	5	8	58	..
April	30.061	49.1	76.2	N.E.	11	11	8	1.78	58.2	317	24	12	8	1	3	2	6	1	4	..	1	27	1	2	35	7
Total										4081	370	105	75	313	88	117	518	116	78	38	6	510	24	37	245	52

ANNUAL REPORT OF CLEVELAND, OHIO. METEOROLOGICAL AND MORTALITY.

Typhoid fever furnished a large total mortality, viz.: 78 (for the calendar year 1885 it is 71), distributed as follows: May to September, inclusive, 21; the other seven months gave 57, October alone, 12. We do not suppose that the number of *cases* reported is full in this item, but the total reported is 116, commencing with August. The highest report of cases is in August, viz., 35.

This collection of facts suggests many indications in the direction of general management of diseases. The first class and the most striking is

THE SUMMER DISEASES OF CHILDREN,

as influenced by heat, whether it be solar heat alone

pretty well established that many poisons, when largely diluted, become harmless, but when concentrated, produce the so-called contagious diseases, each of its kind, and the same is true of most blood-poisoning.

This is a subject, even under the present investigation, that demands our careful attention; for what we cannot entirely destroy or prevent, we should render as harmless as possible. *Ventilation dilutes until it destroys; dilution attenuates until it renders innocuous.*

1216 Willson Avenue.

MEDICAL PROGRESS.

THE TREATMENT OF GRANULAR CONJUNCTIVITIS.—In the treatment of granular conjunctivitis one of two objects is to be kept in view: either to subdue inflammation when this is already excessive; or, when it is deficient, to excite it to greater activity, so as to lead to the absorption of the morbid tissue which has been formed. For the latter purpose various chemical applications have been used, and even inoculation with gonorrhœal pus; while attempts have also been made by scarification to lead to atrophy and absorption of the granulations.

One of the most recent methods proposed for the treatment of trachoma is that described by DR. CECCHINI SETTIMO, of Modena, in the *Gazetta degli Ospitali*, Nos. 100–103, 1885. It consists in destroying the granulations mechanically and chemically, by scraping and cauterization. All the cases Settimo has seen involved the upper lid, which he turns up, protects the eyeball with cotton soaked in a solution of boric acid or smeared with an inert ointment, and scrapes out with a Volkmann's spoon as many of the granulations as possible. He checks the hæmorrhage with cotton dipped in cold water, and then practises a vigorous cauterization with pure nitrate of silver. Before doing this he pushes the lower lid against the reversed upper lid, and places between them a little cotton soaked in a solution of chloride of sodium, to protect the cornea. After the cauterization, the upper lid is well washed with the same solution, followed by a cold solution of boric acid. For the subsequent pain, he instils a solution of morphia and atropia, and applies light compresses dipped in iced water. In some cases he applies a leech or leeches, to the temple. The patient is ordered to keep the head elevated and the eye cool with applications of cold boiled rice, washing it out with boric acid solution.

The operation is contraindicated only when there is pronounced hyperæmia, in which case it is important to cure or diminish this before scraping. Settimo prefers not to use an anæsthetic, as the contraction of the palpebral muscles helps the scraping process, although this is quite painful.

The operation may be done at one sitting if the granulations are soft and not very vascular, and the infiltration is not very great; but, if the granulations are hard and cartilaginous, it is advisable, but not necessary, to make the scraping in two or three sittings, at intervals of not less than three days. Chemosis is to be combated by taking blood from the temple, by incision of the external angle as in the method of Gräfe, and by deep incisions in the conjunctiva.

Settimo has used this method, combining it with the administration of iodide of potassium in twenty cases, with the most brilliant results, and naturally recommends it very warmly for general adoption.

More recently, KRAMSZTYK, in the *Gazeta Lekarski*, has called attention to a method of treating trachoma which was originally proposed by Wicherkiewicz, and which consists in crushing the granulations between the thumb-nails of the operator, or by means of a pair of forceps. The operation is very painful; and, although it has succeeded in a number of cases, it does not appear to have any advantages over the method of Settimo, especially if the granulations are very numerous.

Both of these methods are so heroic, that surgeons must be strongly convinced of their utility and of the necessity for having recourse to them before they are likely to be generally employed. Meanwhile, it is interesting to note, that MINOR, in the *New York Medical Journal* for July 31, 1886, reports that he has had most excellent results with powdered boric acid dusted over the conjunctiva two or three times a day, or less frequently. The application causes pain lasting about thirty minutes, and a free serous discharge, which is soon followed by relief. The improvement in the conjunctiva and the clearing up of the cornea may not be very noticeable for a week, but after this time it will be apparent. Minor has found that boric acid ceases to be tolerated after three or four weeks, when some other drug must be substituted.—*Medical News*, October 2, 1886.

BACTERIUM TERMO TREATMENT.—DR. ROQUER Y. CASADESUS, of Barcelona, having a case of laryngeal and pulmonary phthisis of an advanced character, and wishing to test the value of Cantani's bacteriotherapeutics, asked Dr. Rodriguez Mendez, a well-known microbiologist, to assist him. The condition of the patient was carefully ascertained in consultation, cavities being found in both apices. There was a high temperature, also profuse sweats, diarrhœa, profuse expectoration, great dyspnœa—in fact every sign of acute pulmonary tuberculous degeneration. The patient was in the seventh month of pregnancy. A pure culture of bacterium termo was then prepared by Dr. Botey, and made use of both by means of inhalations twice a day and by intra-laryngeal applications. After a few days the patient's condition was improved, the temperature having fallen from 39° to 38 or 38.4° C. This improvement continued till labor came on, which was of a normal character, but shortly after delivery the woman's condition became alarming, and she died in twenty hours. Dr. Roquer concludes from this case that, whether the remission of temperature was or was not due to the treatment, the bacterium termo was perfectly innocuous, as Professor Cantani states it to be. Dr. Phillipovich, who has made several trials of the treatment of phthisis by the inhalation of cultures of bacterium termo, has published a paper describing the results obtained in the reports of the Odessa Medical Society. In one case the inhalations had to be stopped in consequence of the condition of the patient becoming worse, three cases died, and two were discharged. Dr. Phillipovich's observations agree in general with those of Dr. Görbersdorf, and are decidedly inconsistent with those of Professor Cantani. The expectoration did not diminish, but it was rather more easily secreted, and so the dyspnœa was less. This, however, was probably due to the action of the water and the better aeration of the lungs, rather than to the microbe. In one case the quantity of sputum was increased, and

it became more liquid and very offensive. At the necropsy in this case cavities were found containing tolerably pure cultures of bacterium termo. In none of the cases did the tubercle bacilli in the sputum disappear or even diminish, though the inhalations were continued for seven weeks. Again, no effect was produced on the temperature or sweats, and in all the patients there was noted a greater or less loss of weight. The author concludes that no beneficial effect can be looked for from the use of this method of treatment; indeed it would rather appear, from the post-mortem appearances above mentioned, that inhalations of bacterium termo may be positively hurtful to the human organism.—*Lancet*, Aug. 21, 1886.

SPINA BIFIDA SUCCESSFULLY TREATED.—MR. JOHN KELLOCK BARTON, in reporting this case, says: Inasmuch as the treatment of spina bifida is still unsettled, any case in which a successful operation has been performed is worthy of record. So, very briefly, I will state the particulars of the following case which has been lately under my care in the Adelaide Hospital.

On July 9, Susan H., an infant 2 weeks old, was brought to the hospital by her mother, who had been attended in her confinement by Mr. Hamilton, a pupil of the Adelaide. He had noticed at the time of birth a tumor in the lumbar region, about the size of a small walnut, of a dark purple-red color. This tumor steadily increased in size, and at the time I made my first examination was the size of a small egg, or might more acurately be likened to the half of a small orange, the convex part projecting, the flat or cut surface of the orange attached to the lumbar spine. The surface of this tumor was occupied by a greyish sloughy ulceration, while the sides were of a deep purplish-red color. Fluctuation was very obscure, but pressure certainly diminished the bulk of the tumor, which regained its original size quickly when the pressure was removed. The nature of the tumor, so far as that it was a spina bifida, was pretty clear; but to make this more certain I thrust a fine hypodermic needle into it, and drew out a few drops of a perfectly colorless serum. The question of its being a spina bifida was now established, but the further and more difficult one of whether the spinal cord formed any portion of its contents remained doubtful. The fact that no paralysis existed, either of the sphincters or lower limbs, induced me to believe that this was a meningocele, and not a myelocele; but the facts of its low position and of its purple and ulcerated surface are held by authors[1] as leading to an opposite conclusion, and the result proves that the freedom from paralysis is of more diagnostic value in deciding this important point than is either the situation or the character of the tumor.

Next day, I performed the following operation, the infant being under the influence of chloroform. I cut an elliptic piece out of the centre of the tumor, thus removing all the sloughy central portion; the wall was thick, internally smooth and white, and with numerous small nerves passing into the portion removed, which were of course cut across. Very little time was lost in stopping all bleeding, which was insignificant, and then drawing together the thick purple flaps left on either side by a double row of sutures. Careful anteseptic precautions were observed, and the dressing consisted, first of all, of a dusting with iodoform, then a covering of corrosive gauze (1 in 400), secured well at its edges and round the body with an antiseptic gauze bandage. There was no elevation of temperature, and union was complete and firm in a week. No signs of any disturbance of the nervous system followed.

In ten days the infant was discharged cured. I questioned the mother as to any loss of power in the limbs, of which the child has free use. The situation of the tumor is now occupied by a puckered purple oblong swelling, about one-sixth the size of the tumor which I operated upon, and I have no doubt further contraction will go steadily on for some time.

P.S.—Since this report was written I have received information of the death of the child in a fit of convulsions. No doubt the union of the operation-wound was complete, but the convulsive attack came on too soon after the operation for us to dissociate the one from the other.—*Lancet*, October 2, 1886.

TREATMENT OF SYPHILIS BY INTRAMUSCULAR INJECTIONS OF MERCURY.—MR. J. ASTLEY BLOXAM states that over fifteen hundred patients have been treated by this method, at the Lock Hospital and elsewhere, during the past eighteen months, with the best results. The solution for injection contains 6 grains of the bichloride to the ounce of distilled water, and of this 20 drops constitute a dose. The sore generally begins to heal very promptly after one or two injections, the secondary symptoms are markedly modified, and after a course of treatment extending over a year, more or less, the patient is enabled to discontinue his attendance. Toward the latter end of the course of treatment the injections may be given less frequently, and, as a general rule, not more than from 8 to 12 grains of the perchloride are injected in all. It is undesirable to repeat the injections oftener than once a week, as otherwise salivation might be induced, and the quantity injected each time ($\frac{1}{3}$ of a grain) is found to be quite sufficient until the next time. There are several advantages attending this method of exhibiting mercury. In the first instance, it is only necessary to see the patient once a week, when sufficient mercury is injected to last until the following week; secondly, salivation is not produced, as was apt to happen when the patient continued to take mercury for a whole week away from the supervision of his medical attendant; thirdly, the gastric derangements which are so apt to follow the administration of mercury by the mouth are by this means avoided; lastly, the ease and certainty of the administration, which enable the surgeon to do his own dispensing with a minimum of trouble. A little quinine is generally given during the course as a tonic, but no other form of mercury is administered. The injections are made preferable deep into the muscular mass of the glutei; the pain following is slight and soon passes away, and there is no danger of an abscess. It is desirable that the

[1] Dictionary of Practical Surgery, vol. ii., p. 470.

patient should not take active exercise immediately after the injection, as it has been noticed that blood may be effused at the point of injection, giving rise to the sensation of a severe bruise of the part, which lasts for a few days. The same effect has followed the puncture of a large vessel, but in any case the result is only transient, and disappears after the lapse of a few days.—*Medical Record*, October 9, 1886.

LOCAL ANÆSTHESIA FOR ELECTROLYSIS.—DR. FRANKLIN H. MARTIN, of Chicago, says: "Where it is necessary to use a very strong current of electricity for purposes of electrolysis, or any other purpose, and a reliable means of measuring the current, other than by the sensations of the patient, is at hand, it is very desirable, oftentimes, to have some means of producing anæsthesia. Especially is this the case with women who have been brought to an anæmic and nervous condition from menorrhagia coincident with a fibroid growth of the uterus. In these cases where electro-puncture is used as a means of removing the growth, or even where the somewhat milder electrolitic current is employed for the purpose of causing absorption of inflammatory exudates, there is a very disagreeable burning sensation experienced at the positive sponge electrode. By utilizing the properties of the galvanic current, discovered by Haertner, viz., the direct transference by the galvanic-current of particles in solution through permeable bodies, in a direction from the positive to the negative pole of the battery (the *cataphoric* action of Du Bois-Raymond), a very satisfactory condition of local anæsthesia can be accomplished. The method adopted is as follows: Before applying the positive sponge electrode to the surface moisten the sponge with a ¼ of 1 per cent. solution of muriate of cocaine. As the current is turned on, it will be found that the absorption of sufficient amount of the cocaine is immediately promoted to produce a complete state of anæsthesia of the surface beneath the electrode. This, of course, does not affect the point of application of the negative pole—the point of introduction of the needle. Cocaine can still further be utilized here by injecting hypodermatically a small quantity of the aqueous solution at the point of introduction of the needle through the skin, or by applying a solution of the oleate upon the mucous membrane of the vagina or uterus, if the needle is introduced in this location. By bearing these simple facts in mind, electrolysis for fibroid tumor can be made familiar without the necessity of administering a general anæsthetic."—*Medical Record*, October 9, 1886.

SALOL, A NEW ANTI-RHEUMATIC AND ANTISEPTIC.—DR. SABLI has discovered a new compound in which salicylic acid combines with phenol, to which he has given the name of salol. It is a white powder, tasteless, with a slight aromatic smell, insoluble in water, but soluble in alcohol. The author made several experiments on animals with the drug, and found that the total quantity given with the food could be detected in the urine. Decomposition takes place within the body, through the influence of the pancreatic juice, when the drug passes through the stomach unchanged, which may account for the absence of nausea and vomiting. Sabli did not encounter any unpleasant symptoms with 4 grammes (℥j) daily, and he himself took as much as eight grammes (℥ij) in one day, without experiencing any noises in the ears. It did cause noises in the ears, however, in some patients, but not to the same degree as salicylate of sodium. Under the administration of salol the urine becomes dark, as it does when carbolic acid is given.

The author has given salol in all rheumatic affections, and has attained, at least, the same results as he would have with salicylate of sodium; if anything, the fever seemed to subside more rapidly under the former. A case of chronic urticaria which had resisted all other treatment was rapidly cured with salol, as were also several cases of orbital neuralgia. Salol, in 2-gramme (gr. xxx) doses, three to four times daily, is a powerful antiseptic. In phthisis it is better to begin with small doses (gr. vijss). The author recommends it in diabetes, and, on account of its antiseptic qualities in diarrhœa, typhoid fever, cholera, and cystitis, and as a surgical dressing instead of iodoform. He has had a good result with it in one case of ozæna. It can be used locally in gonorrhœa. To the alcoholic solution some water may be added and an emulsion is thus formed.—*New York Medical Journal*, Sept. 11, 1886.

EXPOSURE TO THE SUN IN CHRONIC HYDROCEPHALUS IN CHILDREN.—This means of treatment has been rarely tried, or even mentioned by writers on pediatrics. Locatelli, of Milan, reports one case which was thus cured, and Nicita of the same city reports three cases. Several of the ancient and early writers expressed the opinion that heat applied to the head would effect a cure. Somma has treated five cases with the following results:

1. *Hydrocephalus Externus.*—Treated with solution of phosphate of lime, vesicants upon the scalp, exposure to the sun for periods of fifteen or twenty minutes. Cured.

2. *Hydrocephalus Internus.*—Iodide of potash, solution of phosphate of lime, exposure to the sun. Cured.

3. *Hydrocephalus Internus;* also paresis of the lower extremities and pulmonary catarrh. Exposure to the sun, with improvement for five months, finally death from broncho-pneumonia.

4. *Hydrocephalus Externus.*—Exposure to the sun. Cure after three months.

5. *Hydrocephalus Externus of Syphilitic Origin.*—Iodide of potash and calomel, acid calcium phosphate and exposure to the sun. Cured.

The following method of exposure to the sun was followed:

An attendant held the child with uncovered head, the occiput being turned toward the solar rays, the position being unchanged for half an hour or less. After four or five days the duration of exposure was increased to forty or fifty minutes. Of course this method did not apply during the cold of winter or the excessive heat of summer.—*Archives of Pediatrics*, April, 1886.

THE
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PUBLISHED WEEKLY.

THE EDITOR OF THIS JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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FEEDING INFANTS—AN IMPORTANT ERROR.

At the recent meeting of the British Medical Association in Brighton, DR. R. P. B. TAAFFE, President of the Section on Public Medicine, in his opening Address to his Section discussed several topics of much interest. After mentioning the efforts that had been made to destroy or abate the coal-smoke and to purify gas, he showed from the vital statistics furnished by the Registrar-General that the annual death-rate in England and Wales during the decennial period ending 1880 was 21.27, instead of 22.4, which it had been for the three preceding decades. He showed further that for the last half decade ending with 1885 this mean death-rate had fallen to 19.3 per 1,000. The details indicated that the greater part of the improvement had resulted from the diminished mortality in childhood caused by improvements in the sanitary conditions affecting the poorer classes.

Following the discussion of general vital statistics, Dr. Taaffe presented some important facts concerning the mortality from infantile diarrhœa. Of 582 deaths from diarrhœa at all ages recorded by himself in seven years, 526 occurred among children under five years of age, and of the latter 433 were children under one year. Of 441 children who died under five years, concerning whose feeding special inquiries were made, 49 only were nursed wholly by their mothers, while 392 had been "fed more or less artificially." Of these, 260 were fed on milk from the bottle; 40 were nursed by the mothers and fed also upon artificial foods; 64 were fed partly on milk and partly on artificial foods; and the remaining 21 were fed on artificial foods, such as oatmeal, arrowroot, corn flour, baked flour, Ridge's and Mifflin's foods, tea-cakes, tops and bottoms, bread-sop, and beef-tea. Dr. Taaffe, after condemning the practice of either feeding or nursing infants too frequently, gives the following directions: "No infant at the breast, or who is being brought up by hand, should be fed more than once in *three* hours during the day and twice in the night; after five months old every *four* hours in the day and twice in the night. If brought up by hand, the food should consist only of milk and water, to be sucked from a bottle. For the first day or two (after birth) the proportions should be—milk one-fourth, water three-fourths. After the first day or two, and up to two months old, milk one-third, water two-thirds; from two to four months old, milk and water in equal parts; from four to seven months old, milk two-thirds and water one-third. A dessert-spoonful of sugar of milk may be added to each bottle."

We have copied these directions from the otherwise excellent address of Dr. Taaffe, not because they are new, for they are substantially the same as have been given by many writers, and which mothers and nurses have endeavored to execute in their care of infants for half a century at least, but because careful clinical observation over a wide field of practice long since taught us that they contained an error of very great practical importance—namely, the excessive *dilution* of the food of infants. Our attention was attracted to this subject at an early period, and more than thirty years since, in addition to careful clinical observation, we prosecuted investigations, chemical and microscopical, concerning the mother's milk in healthy uncomplicated lactation and also when complicated with menstruation and pregnancy.[1] In the same connection we prosecuted inquiries concerning the effects of various degrees of condensation and of dilution of pure milk of the cow as food for infants. The analyses of the milk of three healthy mothers with healthy nursing children, one in the third month of lactation, one in the fourth and one in the seventh, gave a mean composition in 1,000 parts: Water, 878.07; casein, 49.78; butter or oil, 35.53; sugar and extractives, 32.15; and salts or inorganic matter 4.31. In other words, the proportion of assimilative or nutritive matter to the water, was little more than 1 to 7. According to the analyses of Payen,[2] good cow's milk contains in 1,000 parts: Water, 864.0; casein and lacto-protein, 43.0; butter or oils, 37.0; sugar or lactine, 52.0; and salts or inorganic matter 4.0; being in the proportion of 1 part of assimilative material to 6.3 parts of water. It is thus seen that

[1] See Transactions of the American Medical Association, vol. ix, p. 417, 1856.
[2] See Flint's Physiology of Man, Volume on Alimentation, etc., p 78.

the excess of assimilative or nutritive material in the cow's milk is less than four-tenths of one part, which is less than the differences often found between different specimens of healthy human milk.

Suppose, in applying the rule given by Dr. Taaffe, we commence the day feeding of a child under two months old at 6 A.M. and end it 9 P.M., and add two feedings for the night, it would allow eight feedings every twenty-four hours. If we allow four ounces for each feeding, which is a large allowance for an infant of less than two months, it would get thirty-two ounces per day of twenty-four hours; four ounces of which would be nutritive matter and twenty-eight ounces water if it were good mother's milk, and a fraction more if it were good cow's milk. If we may suppose the infant able to appropriate the whole four ounces in the twenty-four hours and lose in the same time by eliminations or waste two ounces, it would grow, or gain in weight, two ounces per day, or at the rate of nearly four pounds per month. But if we comply with the rule and make the milk two parts water to one of milk and still allow the infant four ounces each feeding, or thirty-two ounces per day, instead of four ounces of nutritive material and twenty-eight of water, it would have received only 1⅓ ounce of nutritive matter to 30⅔ ounces of water; and if, as in the former supposition, the infant lost by elimination or waste two ounces per day, instead of gaining an aggregate of near four pounds per month it would actually have lost one pound and a quarter during that time. And such has been the actual tendency of every attempt we have seen made to literally adhere to the rules given in the Address mentioned, although many such have come under our observation during the preceding thirty years. The suggestion of Dr. Taaffe that a dessertspoonful of sugar of milk might be added to each bottle of the diluted milk would only tend to restore the natural proportion of this ingredient, while the proportion of caseine, butter and salts would be largely deficient, and the water in proportionate excess. An infant thus fed with milk containing only one-half or one third of the proportion of solid or nutritive constituents belonging in the natural mother's milk, soon begins to be restless and in less than an hour after feeding is fretting and crying for more. If the mother or nurse yields to its demands its stomach is kept almost constantly filled with the attenuated fluid, which either soon encourages the rejection of much of it by vomiting or diarrhœa, or if absorbed renders the watery element of the blood greatly in excess, and two or three months suffices to bring the child to a state of complete emaciation, the mother and nurse worn out with the fruitless effort to pacify the child's almost incessant worrying; or with less patience they have obtained rest for an hour or two at a time by adding either the anæsthetic effect of a few drops of brandy or whiskey to the child's milk, or ample doses of opiates in the form of cordials and soothing syrups.

We have seen scores of these little sufferers soon restored to the condition of quiet, cheerful, thriving babies by simply insisting on their being fed with milk containing the full natural proportion of solid elements, and sometimes slightly increasing these by either boiling enough to evaporate some of the water, or by adding a very little wheat flour and a few grains of salt while the milk was boiling. The child thus getting enough nutritious material to supply the demands of its tissues in a less bulk of water yet easy of absorption and assimilation, avoiding over-distension of the stomach, takes long quiet sleeps, and grows fat and happy.

HYSTERICAL SOMNOLENCE AND TRANCE.

The *London News* contains the history of a very curious case in the Salpetrière Hospital of Paris. The patient, Eudoxie Hedouin, a woman of 51 years of age, has recently had two periods of morbid somnolence, one of fifty days, the second of eighteen days. This, however, seems to be nothing new for her. As a child she was hysterical; and at the age of 22 she entered La Salpetrière to be treated for paralysis, doubtless of hysterical origin, and it is said that she has not yet recovered from this. In May, 1875, she fell into a state of trance which lasted only two days. On May 12, however, she went into another trance from which she did not awaken until May 27. On the next day she took a full meal, laughed violently, and then became delirious, which scarcely leaves a doubt that her trouble was purely hysterical in origin.

In the last state of trance, lasting eighteen days, Dr. Voisin ascertained that she was not unconscious to her surroundings, and that she could be made to obey a command. He placed a paper containing a drug on the skin of the patient without saying anything; no effect followed. This being removed, a piece of folded paper, empty, was placed on the skin, and the remark made that she would surely vomit. Ten minutes afterwards she vomited. In some respects this case resembles one of hypnotism. She was given a glass which she was told was filled with champagne, though it contained nothing; she eagerly drank the supposed wine. A piece of aloes was given her in place of sugar, and she scarcely seemed to detect the difference.

Trance has been defined as a condition of the nervous system characterized by general muscular immobility, complete mental inertia, and insensibility to surroundings. This definition cannot be accepted, however, as there is often some degree of muscular mobility, the mind is not always completely inert, and the statements of the patients show that they are not by any means always insensible to surroundings. Thus, in the case of the hystero-cataleptic girl in Nebraska, (reported in Pepper's System of Medicine, Vol. V, page 344) she said that she was conscious during the whole time of her trance of seventy days, but that she could not move a muscle, although she exerted her will to the utmost to show that she was conscious. The fact is, it is very difficult in all cases to draw a hard and fast line between trance and a prolonged somnolence, since the same patient may be affected in slightly different ways at different times. Two years ago Dr. Charles L. Dana reported fifty cases of prolonged morbid somnolence. Briquet very properly draws a distinction between prolonged hysteria (or somnolence) and lethargy, as the patient may have periods of sleep within the lethargy. A most interesting case is reported in the *British Medical Journal*, of December 12, 1885, by P. J. Cremen, under the name morbid somnolence. The patient seemed to be in a deep sleep from which he could not be aroused, or as one under the influence of an anæsthetic; and he could not be awakened. At first he was analgesic all over the body, but sensibility returned, as he was able to eat when bread was put into his hand, and he was seen to eat in the somnolent state with the eyes closed. A strong magneto-electric current would arouse him. When told to do so he could walk, but only in a straight line, and he took no pains to avoid obstacles. This somnolent state could be induced at will by pressing on the closed eyes for about two minutes. A very interesting case is recorded in the Transactions of the Royal Society of Edinburgh (Vol. VIII). She remained in a somnolent state from July 1 to August 8. She was bled, blistered and bathed in order to awaken her, but all to no purpose. After having slept for seven days she showed signs of wanting food. She was deaf while in this state until four days before she recovered. When she awakened fully she said that she had no knowledge of what had occurred, even of the blistering and bleeding. In this case also there was some degree of paralysis, which was probably hysterical.

According to Rosenthal, lethargy is never fatal when complicated with hysteria, but uncomplicated with this affection it is rapidly fatal. He records a case in which a young woman remained in this state for thirty hours, and afterwards enjoyed good health. The attack was induced by violent emotional excitement. This case will not fall at all within those cases of morbid somnolence of which we have spoken, but it shows to what conditions an excitable, nervous system may subject a person.

THE INTERNATIONAL MEDICAL CONGRESS.

The Executive Committee of this body, to whom has been entrusted the work of organizing and developing the interest of the profession in making this Congress fully equal to any previously held, have lately shown their interest in the work by sacrificing private engagements, and at their own expense travelling from distant points to meet in general session in Pittsburgh. The meeting was fully attended, and the various reports of the sub-committees and the extensive correspondence of its chairman all showed the advance made in the perfect organization of the Congress. All the Sections of the Congress reported highly satisfactory progress in the appointment of Sectional officers, and the promise of original papers of a high class. The various officers of the Sections, including members of the Council, now exceed three hundred and seventy-five well-known members of the medical profession in the United States. Numerous appointments to Sections have also been accepted by prominent members of the profession in Great Britain, France, Belgium, Holland, Germany, Brazil, and other countries; so that there can now be no doubt as to the international character of the Congress.

Among those recently accepting office as Vice-Presidents of the Congress we note Sir B. Walter Foster, President of the Council of the British Medical Association; Mr. Ernest Hart, Editor of the Journal of the British Medical Association; Sir Thomas Longmore, Surgeon-General (retired) of the British Army; Sir Joseph Fayrer, Surgeon-General of India; Mr. John Eric Erichsen, Sir Dyce Duckworth, and Mr. Jonathan Hutchinson, of England; Professor Dujardin-Beaumetz, M. Bouchut, M. Cadet de Gassicourt, and M. Grancher, of France; Professor Moncorvo, of Rio de Janeiro; M. Servais, of Belgium; Alfred Vogel, of Germany, with many others equally well-known.

As the Executive Committee will continue to quietly prosecute its work, with the sole object of maintaining the honor of the profession in the United States, and making good the invitation given and accepted in 1884 at Copenhagen, and in 1886 at Brighton, we anticipate a result in every way creditable to

our countrymen, and a proper compliment to our guests. Arrangements are under consideration for reduced fares on steamships and railways, and in hotels; and we feel assured that not only will our visitors find all arrangements thoroughly perfected for their pleasure and comfort, but an opportunity to visit this new and extensive country at greatly reduced rates of travel, and under the most favorable circumstances.

SOCIETY PROCEEDINGS.

CHICAGO GYNÆCOLOGICAL SOCIETY.

Regular Meeting, September 17, 1886.

THE PRESIDENT, DANIEL T. NELSON, M.D., IN THE CHAIR.

W. W. JAGGARD, M.D., EDITOR.

DR. JAMES H. ETHERIDGE read a paper entitled

REPORT OF A CASE OF SUPRA-VAGINAL AMPUTATION OF THE PREGNANT UTERUS, COMPLICATING A MULTILOCULAR FIBROID TUMOR.

Mrs. A. B., aged 34 years, married several years, no children, first experienced uterine symptoms some four years ago, which Dr. Knox, her medical attendant, recognized as due to a uterine retroversion, and treated with a pessary for six months. On March 10, 1884, he was again called to her, and found the uterus again retroverted. "This time, however," he writes, "it was apparently fixed in the pelvis; the *os tincæ* was caught firmly behind the pubes, and in Douglas's *cul-de-sac* was a firm sensitive mass that seemed to be more than the *fundus uteri*. There was also considerable abdominal tenderness, fever, and nausea. It was difficult to diagnosticate between cellulitis and simple retroversion with impaction. Careful manipulation, however, in Sims's position, corrected the displacement with complete relief of the distressing symptoms. Hot fomentations and vaginal douches aborted the threatening cellulitis. Two days thereafter, on careful examination, I detected a sub-peritoneal myoma on the left posterior aspect of the fundus. It was about half the size of an unimpregnated uterus. This accounted for the tight impaction of the retroverted organ.

"A pessary was again introduced, and 20 minim doses fluid extract of ergot, three times a day, ordered. The drug was faithfully taken for about twelve months. During that time a second fibroid appeared upon the right lower and anterior surface of the womb. These tumors steadily enlarged until the uterus was lifted entirely out of the pelvis. Excepting the results of mechanical pressure, the patient's health was excellent, and menstruation was undisturbed.

"April, 1885, the ergot was discontinued. Owing to the sub-peritoneal character of the fibromata their growth was uninfluenced by the drug."

The growth of the tumor in the last two years has been slow but progressive. In the last six months it caused no special symptoms beyond vague suprapubic pains at times.

In May, 1886, thirteen months after the stopping of the use of ergot, Dr. Knox was again summoned to attend her for a distressing nausea. At the same time the menses, which had never been excessive, ceased. Mammary changes supervened.

In the ensuing three months the tumor grew rapidly. To Dr. Knox must be ascribed diagnostic skill of the highest order in determining the presence of pregnancy in such a mystifying condition of things. He decided that she must be pregnant, and awaited the expiration of the first three months to produce an abortion, hoping thereby to induce involution to such an extent as, at least, to arrest the rapid increase in the growth of the tumor. Accordingly, on Aug. 1, 1886, when the three months had expired, he introduced a sound into the uterus four inches. Its withdrawal was followed by a small amount of blood, the nausea and vomiting ceased, and the mammary symptoms disappeared. Nothing further ever followed indicating the previous existence of pregnancy or an abortion, and the conclusion was reached that conception had not occurred.

The rapid encroachment on the abdominal organs was progressively killing her. Her strength had greatly diminished. For six months she gradually emaciated. Her sufferings from the pressure of the tumor were great, and eventually led to her giving up and remaining in bed nearly all the time because she thus experienced the most comfort. In addition she was easily put out of breath by exertion.

Forty hours before the operation she had a free purge, and twenty hours later she went to the Presbyterian Hospital to remain overnight, to receive a bichloride of mercury bath and to have her pubes shaved.

At the time of the operation she presented the following measurements:

1. Girth at the umbilicus, 31 inches.
2. From ensiform cartilage to umbilicus, 7 inches.
3. From umbilicus to symphysis pubis, 6.5 inches.
4. From either ant. sup. spin. proc. to umbilicus, 7 inches.

From external examination it was found that the tumor extended from the right iliac fossa across the abdominal cavity in a straight line to the spleen. Its length was, apparently, double or treble its width. It was freely movable, free from adhesions, and solid. It presented great tenderness in the right iliac fossa.

Per vaginam the *cervix uteri* was found very high up in the left iliac fossa and the *fundus uteri* was apparently thrust into the right iliac region. The whole tumor moved with the uterus. A very small resiliency offered to conjoined manipulation led me to think that I had to do with a *fibro-cystic tumor of the uterus*. The sound entered the uterus four inches and seemed to pass towards the umbilicus.

Just before commencing the operation a sound introduced into the bladder showed that this viscus was not enlarged by being drawn up out of the pelvis by the growth of the tumor.

At the same time, the sound was introduced into

the uterine cavity and entered only four inches. It had to be bent at an obtuse angle to make it engage in the cervical canal. Its introduction was attended with a small hæmorrhage, which subsequently was the innocent cause of severe but brief alarm.

The instruments used in the operation were dipped in a five per centum solution of carbolic acid, and subsequently kept in a two per centum solution of the same agent when not in actual use. No spray was used. The sponges were antisepticised with carbolic acid. The details of the operation were simplicity itself. The incision began one inch above the umbilicus and extended down to within an inch and a half above the pubes. It was carried to the left of the umbilicus and measured six inches. Upon exposing the tumor it was found wholly free from adhesions. It extended to, and pressed upwards, the spleen. It was oblong, its length being about treble its width. It was situated obliquely across the whole abdominal cavity. Its upper end was easily turned out of the abdomen, and the whole mass was lifted out of its bed. Its smooth, red surface nowhere indicated the outline of the uterus. Its lower end seemed to be one solid mass of pedicle extending completely across the whole inlet of the pelvis from side to side. The laminæ of the right broad ligament were separated in the most conspicuous manner that I ever beheld. The two ovaries were attached to the mass on a level with the umbilicus, having been lifted completely up into the abdominal cavity.

After buttonholing the capsule of the tumor as low down as was practicable, it was peeled off as far as the finger could reach right and left, and ligatured in small masses in two places an inch or more apart and then divided between the ligatures. In this way all of the capsule that could be secured in ligatures and cut was soon treated, and the hæmorrhage from the operation was barely worth mentioning. The right uterine artery, which was much enlarged, was torn across and quickly secured. All of the spermatic and uterine arteries were secured with double ligatures of No. 14 silk. Thus the apparently large pedicle was much reduced in size and was found to be about equal to the normal *corpus uteri*.

Around this mass was placed a Kœberlé's *serre-nœud*, which was properly tightened, and the tumor excised. Small vessels were then secured. The clamp was then slowly loosened and the vessels of the stump were tied.

The cervical canal was conspicuously visible in the centre of the stump. It was drawn up by a vulsellum as tautly as possible and excised for the length of at least one inch. The piece removed was cone-shaped, with its base upwards. Six stitches were then used, from side to side, placed so that when tightened the peritoneum was accurately brought together over the top of the stump. They were tied as tightly as they could be drawn. All further bleeding was attended to *secundam artem*, and the abdomen closed with nineteen stitches. The initial incision was made at 10:30 A.M., the stitches were begun at 11:42 A.M., and the operation was completed at 12:01 P.M.

She rallied from the operation in a few hours. For a period of four days afterwards she had a most intractable vomiting. After feeding by the rectum and permitting absolutely nothing to pass her lips, this troublesome symptom slowly diminished and gradually disappeared, but not until she had acquired a slightly pinched condition of the *ala nasi*, which brandy caused to disappear. On the third day an offensive odor proceeded from the vagina. A carbolized solution permanently corrected it. It must have arisen from decomposition of the small amount of blood provoked by the introduction of the uterine sound.

Thereafter naught especially eventful occurred to direct attention to, excepting the following points:

1st. The patient never had an alvine dejection after the operation. Flatus passed only after the colonic distension permitted it, through a rectal tube. Repeated efforts were made to secure defecation, without result.

2d. At no time after the operation did she have a chill or sweats. The days were very hot and her greatest comfort was in being gently fanned and in dabbling her hands in a bowl of water placed at her side.

The following record of pulse, temperature and respiration was kept till the death of the patient, which occurred eleven days and nineteen hours post operation.

August 8.—5 P.M., P. 128, T. 101°, R. 18; 8 P.M., P. 120, T. 100.8°, R. 16; 10.45 P.M., P. 120, T. 100.2°, R. 20.

August 9.—8.45 A.M., P. 110°, T. 99.6, R. 20; 12.30 P.M., P. 116, T. 100°, R. 16; 8 P.M., P. 116, T. 100.3°, R. 24.

August 10.—10 A.M., P. 118, T. 100; 4 P.M., P. 112, T. 99.3°, R. 26; 8 P.M., P. 110, T. 99.5°, R. 22.

August 11.—8 A.M., P. 124, T. 100·5°, R. 22; 2 P.M. P. 110, T. 99.7°, R. 18; 8.30 P.M., P. 128, T. 100.7°.

August 12.—8 A.M., P. 114, T. 99.5°, R. 18; 2 P.M., P. 112, T. 98.7°, R. 17; 8 P.M., P. 114, T. 99.5°, R. 14.

August 13.—7 A.M., P. 114, T. 99.8°, R. 14; 4 P.M., P. 108, T. 99.6°, R. 14; 8 P.M., P. 114, T. 100.3°, R. 14.

August 14.—7 A.M., P. 112, T. 100.9°, R. 14; 2 P.M., P. 112, T. 99.8°, R. 16.; 8 P.M., P. 116, T. 99.5°, R. 18.

August 15.—8 A.M., P. 120, T. 99°, R. 16; 4 P.M., P. 116, T. 99.5°, R. 16; 8 P.M., P. 114, T. 99.4°, R. 16.

August 16.—8 A.M., P. 112, T. 100°, R. 14; 4 P.M., P. 108, T. 100.6°, R. 14; 10 P.M., P. 112, T. 100°, R. 16.

August 17.—8 A.M., P. 110, T. 99.4°, R. 16; 4 P.M., P. 120, T. 99.6°, R. 16; 8 P.M., P. 120, T. 99.8°, R. 16.

August 18.—6 A.M., P. 118, T. 101.5°; 12:30 P.M., P. 114, T. 101.6°, R. 14; 8 P.M., P. 124, T. 02.8°, R. 18; 10 P.M., T. 102°; 11:50 P.M., T. 103.2°.

August 19.—1 A.M., T. 102°. Death at 6:45 A.M.

The autopsy was made thirty-two hours after death, and revealed a pelvis filled with fluid consisting of blood and pus. The small intestines were agglutina-

ted over the pelvic inlet, almost hermetically. The surfaces of the small intestines turned towards the cavity of the pelvis presented a condition of sphacelus approaching demarcation. The pelvic cellular tissue was completely honeycombed with pus cavities. The stump presented a shrunken appearance, as though all of the stitches had been loosened, yet no pelvic fluid had found its way into the vagina through the cervical canal. The patient had succumbed to septicæmia. I regret that I did not drain.

Examination of the tumor revealed the fact that it was a multilocular fibroma, and that it grew from the anterior wall of the *corpus uteri* The cavity of the uterus was found on a level with the umbilicus and contained a three months fœtus in unruptured membranes, evidently alive up to the time of operation. The cervical canal was 5½ inches long, which fact explains the immunity of the membranes from puncture by the introduction of a sound only four inches. The canal resembled the letter U, with its legs pulled apart, starting from the extreme left iliac fossa at the *os uteri* it passed towards the umbilicus two inches, and was then deflected at an obtuse angle towards the spleen.

Upon laying open the uterine cavity it was found to be in appearance a cavernous hollowing out of the posterior surface of the tumor. In front of it was nearly the whole width of the tumor. Its posterior boundary was a wall of uterine tissue thinner than the normal, unimpregnated posterior uterine wall. It was situated in the middle of the tumor.

The membranes presented a leaden grayish appearance, and were filled with fluid, its smooth undulating surface, in contrast with its nodular surroundings, looking not unlike the surface of "The Devil's Punch Bowl" on the top of Mt. Mangerton.

The fœtus was a male. Its cord was seven inches long and was normally attached.

Microscopic examination of the tumor by Dr. Ochsner shows its character to be purely *fibromatous*. Its weight was about ten pounds.

Remarks.—The removal of fibroid tumors which are slowly but surely killing patients has now passed into the category of recognized and justifiable operations. The astonishing successes of Keith in removing them are sufficient guaranty of justification for removing such growths under proper conditions.

But the complication of large fibrous tumors of the uterus with pregnancy presents the gravest possible condition for the surgeon's consideration. Conception seemed to give an impulse to the rapidity of the growth of the tumor under consideration that was very surprising. The arrest of its growth or its removal were the two horns of the dilemma. Against the production of abortion there are serious objections. It is followed by disproportionately great dangers and cannot possibly lessen the size of the growth materially. The possibility of uncontrollable hæmorrhage from the seat of the placenta on a non-contractile mass of tumor must be faced in producing an abortion. In addition the dangers of septicæmia from puerperal disintegration of the tumor are not to be forgotten. While running the two risks of hæmorrhage and septicæmia from producing an abortion there is the very great possibility of avoiding a future extirpation of the whole mass by inducing a cessation of growth of the tumor, or even possibly by inducing a greater or lesser involution of the growth. The examination of the tumor shows conclusively that the uterus could never have extruded the fœtus and its adnexa through the elongated cervical canal because of the inutility of the uterine muscular fibre through fibromatous degeneration. Consequently abortion would in all probability have proven fatal through septicæmia. I am thoroughly convinced that the patient could not have lived many weeks longer without the death of the fœtus, when the overwhelming disaster of fatal sepsis would have speedily ensued without any compensatory explanation short of an autopsy, since the idea of pregnancy was about abandoned because abortion failed to occur; and the non-appearance of the fœtus *per vias naturales* would afford no satisfactory evidence of what had occurred, but quite to the contrary would have rendered a mysterious case much more mysterious. In such an event, *sine autopsia*, the pathological reasoning would have been that spontaneous necrosis of the fibroma had occurred and septicæmia followed.

References.—Hegar and Kaltenbach report six cases in the third edition of their "*Operative Gynecology*," 1886, as follows:

Author.	Date.	Time of pregnancy.	Character of Tumor.	Result.
Kaltenbach	Mch. 2, 1880	Fifth month	Myoma	Recovery
Wasseige	Mch. 18, 1880	Fifth month	Myoma	Death 6th day
Nieberding	May 10, 1882	Fourth month	———	Death 40 hours P. O.
Schroeder	June 21, 1884	Third month	Myoma	Recovery
Schroeder	June 10, 1884	Third month	———	Recovery
Walter	1883	Fourth month	Colloid	Death 9th day

Case 7.—Dr. H. R. Storer amputated the pregnant uterus, in a primipara, æt. 37 years, after three days of labor had passed, for a fibro-cystic tumor. The pedicle was constricted by a double metallic ligature and kept outside. The patient died in seventy hours of septicæmia. (*Journal of Gynecological Society of Boston*, Oct., 1869, p. 223.)

Case 8.—Prof. S. Tarnier, Neuilly, France, on February 24, 1879, removed the uterus from a primipara æt. 33 years for a fibrous tumor of the uterus, after the patient had been in labor seven days. Condition of patient at the time of operation, very unfavorable. The fœtus was putrid, gas in the uterus having been found. Pedicle was kept out with a metallic pin and metallic ligature. Patient died of septicæmia on third day. (*Annales de Gynécologie*, Aug., 1879, p. 81.)

Case 9.—Dr. Zweifel, of Erlangen, Germany, on July 31, 1880, removed, from a primipara æt. 37 years, the uterus, several hours after labor began, because of a fibroid tumor in the cervix. Patient died on the sixth day of septicæmia. The pedicle was tied with double silk ligature. (*Archiv für Gynäkologie*, B. 17, H. 3.)

Case 10.—Prof. Cataliatti, of Palermo, Italy, on October 28, 1880, removed the pregnant uterus from a primipara æt. 41 years for an interstitial fibroid of the posterior uterine wall soon after the inception of labor. The pedicle was kept outside with wire ligature and transfixed with metallic pin. Recovery fol-

lowed. (*Bulletin dell. Academia di Medicina di Palermo*, 1880.)

Case 11.—Dr. L. Prochownick, of Hamburg, Germany, performed hysterectomy, April 21, 1881, on a primipara æt. 40 years, at seventh month, about twenty-four hours after the discharge of the liquor amnii, for a fibromyoma of the uterus impacted in the pelvis. The pedicle was held out of the abdomen with Péan's constrictor, two long pins and stitched to the lower angle of the wound. The patient died in sixty hours p. o. from septicæmia. (*Deutsche Medicinische Wochenschrift*, No. 40, 1882.)

Case 12.—Dr. Fochier, Lyons, France, on November 23, 1882, amputated the uterus at term, after the patient had been in labor three days, for a fibroid in the uterine cervix. Recovery followed. It was her fourteenth pregnancy. The pedicle was kept out in the lower angle of the wound. (*Lyon Méd.*, May 20, 1883.)

Case 13.— Dr. M. Hanfield Jones reported in *Transactions of the Obstetrical Society of London*, vol. xvii, 1886, the case of a woman at term in whom delivery was impossible because of a subperitoneal fibroid in the true pelvis. The entire uterus and its appendages with the tumor was removed and the cervix clamped. The patient died of peritonitis on the third day.

Case 14.—Amputation of the pregnant uterus at term, by Dr. M. Hofmeier, for fibroid tumor in the pelvic cavity. Reported by Dr. P. F. Mundé in the *American Journal of Obstetrics*, Sept., 1886, vol. xix, p. 905. Mother and child both saved.

Case 15.—Large pediculated subperitoneal fibroid. Pregnancy, two months. Removal of tumor, uterus and ovaries. Result not stated. Operator, Meredith. Reported in the *American Journal of Obstetrics*, Sept., 1886, p. 923.

Dr. J. S. Knox said: I want to call attention, in the case reported by Dr. Etheridge, to the rapid development of myomata after the establishment of pregnancy. I have two other cases of uterine fibroid that came under my care about the same time as the patient reported by Dr. Etheridge and who were treated similarly, and in whom also menstruation was not disturbed. They are still in perfect health, and the probabilities are that when they die it will be of some other disease; one being a widow, the other an unmarried woman. The growth of this myoma before us was slow but persistent, in spite of the use of ergot, and until the time the menses ceased and pregnancy commenced, the woman enjoyed perfect health, all unfavorable symptoms appearing within three months preceding operation. Another fact I would like to call attention to is the danger of abortion in such cases. With the consent of Dr. Etheridge, I delayed any operative procedures until the woman had reached the full three months of pregnancy, that I might produce an abortion; I introduced the sound with great difficulty, and passed it up full four inches; it produced considerable hæmorrhage, which continued for about three days. The nausea ceased immediately and the patient noticed a diminution of the size of the breasts and lost the sense of fulness of the abdomen. Her appetite returned and she took a great deal of nourishment, which improved her physical condition very much. A strange result, seeing the abortion was not accomplished. In opening the tumor after its removal, I was satisfied that if I had produced the abortion the woman would probably have died of sepsis or hæmorrhage. There was no possible outlet for the contents of the uterus, and I think it was a fortunate thing that we did not succeed in accomplishing the abortion. Under similar circumstances I would prefer hysterectomy with its risks to abortion with its risks.

Dr. E. C. Dudley said: Notwithstanding the general principle established by ovariotomy that the extra-peritoneal method is in itself dangerous, and that it should consequently be avoided whenever perfect intra-peritoneal hemostasis can be secured, and notwithstanding the fact that this general principle should stand for all operations involving the removal of abdominal tumors, yet the best statistics of the intra-peritoneal method in hysterectomy show a mortality of 30 or 40 per cent., while Keith and Bantock, with the clamp or *serre-nœud*, have a mortality of only 10 or 15 per cent. Now if it be true that certain dangers are inseparable from the extra-peritoneal method, it follows that part of this 10 or 15 per cent. of mortality must be in consequence of it, and that the statistics might still further be improved if by some means an intra-peritoneal ligature could be applied which would give the same security against hæmorrhage and permit operators to dispense with the clamp. But the dangers of the silk ligature are greater than those of the clamp because, however thoroughly applied, and however carefully the stump be stitched together, shrinkage of the stump from the escape of serum almost always occurs within a few hours, with consequent loosening of the ligatures and hæmorrhage which may be fatal at once from great loss of blood, or later from septicæmia. The indication clearly is for an elastic ligature capable of following up the shrinking stump and of securing thereby permanent hemostasis. India-rubber fulfils this indication, and if properly applied is capable of becoming readily and safely encysted. The experiments of Löwenhardt and Hallswachs, together with the numerous operations of Olshausen and others, give good evidence that the India-rubber tube when dropped into the abdomen is free from danger. It is true that certain cases have been reported in which sloughing of the pedicle has followed the application of the elastic ligature with resulting abscess, but this occurs in consequence of using a ligature of any material, so large that it cannot imbed itself in the stump, and thereby permit the surface to close over it so as to secure the prompt establishment of collateral circulation to the distal portion of the stump.

Not very long ago the question was raised whether in supra-vaginal amputation it is necessary to remove the ovaries at the same time—a question to which experience has given an affirmative answer. Péan has observed a case of catamenial hæmatocele, Hegar a case of extra-uterine pregnancy and Kaltenbach a case of distressing molimen recurring monthly in consequence of leaving the ovaries after hyste-

rectomy; therefore, unless the patient has passed the menopause, they should if possible be removed on principle.

DR. H. T. BYFORD said: I would like to ask whether such ligatures as Dr. Dudley speaks of could be prepared beforehand? (Dr. Dudley: You might prepare 300 of different lengths and select the one you want.) With such a quantity of fresh ones on hand one could undoubtedly find one to use. Schroeder's later percentages are, I believe, a little more favorable than Dr. Dudley seems to think, and enable him to claim with some degree of reason, that his intra-peritoneal method is the best.

THE PRESIDENT said: One word in relation to the remarks of Dr. Dudley concerning ligature: The shoemaker's stitch, using the silk ligature, was introduced in 1881 by Dr. Marcy, of Boston. I am not informed how many times it has been used. It comes nearer obviating the difficulties of the silk ligature, I think, than any other plan in use. His method is sewing the cervix with the shoemaker's stitch. One end of the silk ligature is carried through by a strong needle threaded at the point and mounted in a handle. This is then unthreaded and the other end threaded, bringing this through as the needle is withdrawn. In this way both ends of the suture lie in the same opening in the tissues, though running in opposite directions. Other stitches, as many as may be needed and as near together as is deemed necessary, are inserted in the same way.

This is a continuous suture, and consequently more elastic than the ordinary suture, and there is but one knot, at the termination of the suture, and if there seems to be danger from hæmorrhage a second row of sutures may be put in at right angles to the first. In the cases I have known with this suture there has been no difficulty from hæmorrhage or sepsis. The tumors were not large, and perhaps that explains the success of the method. I have never had an opportunity of trying it. It seems to me very desirable to use silk if we can to stop the hæmorrhage or oozing from the vessels. I don't exactly know Schroeder's plan of using the double row of stitches, whether it is substantially this method or not. One thing further which Dr. Merriman has touched upon and which we should all profit by, viz.: that when there is evidence of sepsis slight or considerable we should open the abdominal wound. In all the autopsies I have made after these operations where sepsis has been the cause of death, I believe they could have been saved if the wound had been opened and properly treated three or four days before the death of the patient.

DR. H. P. MERRIMAN said: I was so fortunate as to be present at Dr. Etheridge's operation. One point that he did not mention is that after the removal of the tumor and after the use of the ligatures, which he applied to each artery by itself, and not in one mass around the pedicle, the pelvis was entirely dry, so much so that when the question of a drainage-tube came up, I believe every one present said they could see no reason for its use. There was no exudation. The sponge came out hardly colored after it was placed in contact with the surface that had been denuded, and there was apparently no need of drainage, yet afterward we had oozing from this surface and the formation of bloody serum in the cavity, with septicæmia as a result. I was present at the autopsy, and am convinced that had a drainage-tube been used this patient would have recovered. I don't know but that if after eight or nine days, when the symptoms began to show septicæmia, there had been an opening of the cavity, the septic material might have been removed and the case have had a fortunate termination. The danger seems to me to come from septicæmia rather than from any direct loss of blood there may be from hæmorrhage, although I can see that there might be, even with the drainage-tube, sufficient exudation of the parts to exhaust the patient and produce a fatal termination. There was one thing that struck me with considerable interest, and I don't know what bearing it may have. She had taken ergot uninterruptedly for a year with a general improvement of her health; after this use of the ergot she became pregnant for the first time in her eight years of married life. Was it a coincidence or was there some relation between the use of ergot and pregnancy?

DR. C. T. PARKES said: I am very much interested in this discussion, as it has brought up the question of how to treat the pedicle. Out of five hysterectomies that I have done, four by the intra-peritoneal and one by the extra-peritoneal method, the one that was treated by the elastic ligature died quicker than any of the rest. I am not favorably impressed with it, and think it is an unsafe ligature to use because it never ceases acting; it succeeds in stopping bleeding, but is apt to stop all circulation, and in quite a number of these cases the portion beyond the ligature sloughs and you have a sloughing wound, and may have the slough lodging in the peritoneal cavity. In the case just referred to the stump of the uterus sloughed and was a stinking, decomposing mass on post-mortem examination. Another objection I have to this ligature is that it can be applied only to the uterus, the stump itself. There are many cases, where from one circumstance or another you are led to operate, and in which the tumor does not always have a pedicle that can be embraced by any ligature. The plan that I have used for a number of years in employing the elastic ligature for other purposes, is to draw it taut and tie the ends together with silk. By fastening the ligature while tightly drawn, you can cut the ends fairly short and have no knot at all. The plan I adopted in the operation reported to-night, was a combination of the silk ligature and the cautery. I believe it to be the best method. I was very much impressed on reading Dr. Keith's recent work on uterine tumors, by an expression in reference to the treatment of the pedicle. He now treats it almost entirely by the extra-peritoneal method, but thinks the intra-peritoneal will be the coming method, the pedicle being secured by some application of the cautery to the divided surfaces. This is the best method for controlling hæmorrhages. Often there will be certain spots where arteries of some size come up through the tissue, and perhaps an isolated ligature will have to be

applied to them. I don't believe that any wound in the peritoneal cavity that is at all extensive in character, should be left without drainage. I have been satisfied, in the cases that have come under my observation, that one of the main causes of death has been from the neglect of this precaution. When I have divided a large surface, whether I have a dry cavity or not, if that surface is free in the peritoneal cavity, I shall use drainage. I do not think that it is possible to make any comparison between laparotomies for uterine tumors and ovarian tumors. There never will be the same conditions and the proportion of recoveries will never be the same. Dr. Keith does not pretend to say that one out of fifty of the cases that come to him are subjected to operation. I believe the proper method of controlling hæmorrhage and treating the stump in uterine tumors is by the combination of the silk ligature and searing the stump. The heat of the cautery I use is always a dark red. I have always adopted the plan of putting on to the stump that is to be seared the compress forceps or clamp, leaving a quarter of an inch of the tissue above it, and burning that down close to the forceps until it is perfectly smooth. I have always drained through the external wound, normally the abdominal cavity is closed and abhors any abnormal effusion; the elasticity of the walls and viscera presses it out if an opening be present.

Dr. Bartlet asked with reference to a case of double ovariotomy: At the time of the operation it was noticed that notwithstanding active purgatives had been used previously, the descending colon was full of hardened fæces: she subsequently developed obstruction of the bowel and it was impossible to get any motion at all. I examined the rectum high up, found a tight stricture, and got the bowels emptied after this was forcibly dilated.

Dr. Charles T. Parkes read a paper, entitled,

SUCCESSFUL REMOVAL OF THE UTERUS FOR FIBROIDS.

Mrs. L., an American lady, 37 years old, was first examined by me March 11, 1886. She had been married about nine years, but had never been pregnant. The consultation was held for the purpose of getting relief from an abdominal tumor, which first began to show evidence of its existence some three years ago. The first symptoms noticed was a burning pain in the right side, which continued with greater or less severity for about six months, when a small painless tumor was recognized deep in the right groin. This growth continued to enlarge steadily until she saw me, without any exacerbation of rapidity, until during the last six months when it has grown more rapidly and its volume has increased to a greater extent than during the entire previous period of its history. Lately also the patient has lost rapidly in strength and flesh. There has been no interference with menstruation, that function being performed normally the entire time.

The tumor has seemed to diminish in size during menstruation, at least the feeling of fullness was lessened at those periods. The mammæ have not shown evidence of change of any nature. The right leg has swollen slightly for short periods of time and been the site of considerable neuralgic pain. On inspection the abdomen was evenly distended by a symmetrical tumor, occupying a central position and reaching close to the *appendix ensiformis;* the respiratory acts make no impression upon it. Palpation determined the presence of considerable free fluid in the peritoneal cavity and an indistinct, uncertain kind of fluctuation in the tumor itself. There was well-marked resonance surmounting the upper half of the tumor. The mass itself was quite tender to the touch. Vaginal examination revealed the os high in the pelvis, centrally located, with a small mass behind it, seemingly continuous with it, which was supposed to be the retroverted uterus. The free abdominal fluid rendered this examination unsatisfactory. No sound was passed. No positive diagnosis was made, but the supposition favored an ovarian growth. The patient desired an early operation.

She was advised to remain quietly in bed and to take such medicines as would probably lead to removal of the ascites. These instructions were carried out, and the second and final examination was made April 11, 1886. The patient was very much reduced in flesh and very anæmic, all the mucous surfaces exceedingly bloodless. Examination showed the peritoneal fluid entirely removed—the tumor standing out freely and prominently for inspection on all sides. It still seemed to give rise to fluctuation; palpated by several medical gentlemen, and the testimony of all was that it contained fluid. To pressure the sensation was that of elasticity. Vaginal examination now showed plainly that the uterus was incorporated with the tumor, the sound went directly into it for five inches. On the posterior surface two small tumors were now plainly felt, the largest of them was supposed to be the retroverted uterus at the first examination. The diagnosis now was a uterine tumor.

The operation for removal was done at the Presbyterian Hospital, April 13, 1886, in the presence of Drs. Gunn, Etheridge, Graham, Adolphus, Mitchell, Ochsner and others. An incision was made in the *linea alba* from the umbilicus to the pubes and the tumor exposed. It showed a white, glistening surface, very much like a cyst, and seemed to contain fluid—the introduction of the trocar was not followed by any flow of fluid, and during the manipulations the tumor changed to a darkish red color. This change of color upon manipulation I have seen occur on other occasions, and its occurrence is a very sure indication of a uterine tumor. The incision was prolonged several inches above the umbilicus and the mass turned out of the cavity. After ligating and compressing the broad ligaments with forceps they were divided and the uterus cut through three-fourths of an inch above the cervico-vaginal junction. Paquelin's cautery was used to disinfect and destroy the cervical canal and to sear the uterine stump. It was also applied freely to the edges of the divided broad ligament on both sides. This controlled perfectly all hæmorrhage except from two spurting arteries on the opposite lateral edges of the uterine stump; these were isolated and tied separately. All ligatures were of carbolized silk. A large rubber

drainage tube was carried to the bottom of Douglas's *cul-de-sac* and the extensive abdominal wound closed by eighteen sutures.

The patient was put to bed considerably collapsed, but rallied well, and as the record shows until she left for her home, May 30, never had a temperature of 100°. There still remains a small sinus at the site of the drainage tube, discharging about 1 dram of seropus in twenty-four hours. One of the silk ligatures has been discharged through it. The lady has gained flesh and strength rapidly, and is free from a trouble which was rapidly robbing her of all comfort in life and hastening her death.

The drainage tube did excellent service in this case, allowing the exit of large quantities of bloody serum for many days after operation. In my practice its use has always served a good purpose when large raw surfaces were left in the abdominal cavity from whatever cause.

In spite of the absence of rise of temperature I have never managed an abdominal section in which the external wound did so badly. The main portions of the skin united by first intention but a large abscess formed in the sheath of the rectus muscle, the pus from which extended from one end to the other of the wound; the nozzle of the irrigator introduced at one extremity of the wound and the carbolized water turned on, caused the pus to flow out freely from the opening at the lower end; the peritoneal edges united firmly at once and so saved trouble from this source.

It was slow in healing, several weeks, but finally united very soundly. The patient's very feeble vitality may account for the bad course taken by the wound. The wound was dressed, as I have been in the habit of doing for years, absolutely dry, with absorbent cotton and iodoform. My experience with these cases rather confirms a supposition that the frailest and weakest patients are the ones most likely to recover.

At the time of removal the tumor weighed fourteen pounds. Even after removal many gentlemen present were convinced from its consistence that it contained a cavity holding fluid, so very deceptive was its elasticity.

DOMESTIC CORRESPONDENCE

LETTER FROM NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Dr. Julius Althaus's Address before the Academy—Some Phases of Cerebral Syphilis—The Cautery in Paraplegia from Potts' Disease.

The opening attraction at the Academy of Medicine, at its first meeting after the long vacation, was the distinguished London neurologist, Dr Julius Althaus, who has for some time past been a corresponding Fellow of the Academy. He was greeted with a very large audience, and received with much applause when introduced by the President, Dr. Jacobi. After expressing his appreciation of this cordial reception, and the pleasure which it gave him to be in America and appear before the Academy, he stated that it was thirty-six years since he had first met Dr. Jacobi. This was when they were both attending lectures at the University of Bonn, on the Rhine, and he paid a graceful tribute to the talents and industry of the latter as a student.

The subject which he selected for his address was "Some Phases of Cerebral Syphilis," and the special topics to which he directed his attention were syphilitic coma and syphilitic hemiplegia. While the latter was one with which our specialists have for a considerable time been more or less familiar, the subject of syphilitic coma was almost wholly a new one, and Dr. Althaus presented a graphic clinical picture of the affection which was in every way masterly and which fairly enchained the attention of his audience. Altogether he had met with eight cases of syphilitic coma, and they were all in males between the ages of 20 and 40. In one case the coma came on only eight months after the contraction of the primary sore; in six the period after infection varied from three to five years; and in one it was developed after an interval of no less than seventeen years.

The exciting causes which he mentioned were overwork, mental anxiety or excitement, sexual excess and alcoholic excess; but in two of the cases referred to no appreciable exciting cause could be made out. Among the premonitory symptoms he spoke of headache, confusion of ideas and drowsiness, defective vision with black spots before the eyes, numbness in the limbs, and more or less loss of muscular power.

He then proceeded to describe the symptoms of the initial stage. Habitually the coma comes on during sleep, and the patient is usually discovered in the morning lying quietly on his face. He evidently suffers no pain, and there is no restlessness or tossing of the body. The countenance is utterly devoid of expression, and is generally pale. Sometimes the patient can be partially aroused. If so, he will complain that he cannot see, and on opening the lids, the eyeballs will be found to be deeply contracted within the orbits. There is also divergent strabismus, the degree of which will vary according to the intensity of the coma. The pupils are contracted, and the reflex sensibility of the conjunctiva abolished. There is marked relaxation of the muscles, the tone of which is completely lost, and the limbs on both sides are affected alike. There is more or less anæsthesia and the tendon reflexes are either diminished or entirely abolished. There is also incontinence of the excretions from paralysis of the sphincters. The urine dribbles away, but, as a rule, the bowels are constipated. If they are opened by purgative medicine, however, their contents are passed involuntarily. The pulse is generally slow—40, 50 or 60. In one case it was as slow as 36, but in another it was 86. Its quality is variable. The respiration is slow and shallow; the average frequency being 8 to 10 a minute. The temperature is below normal (96 to 97), and in one case was as low as 95. As a rule, the skin is dry and parched, and the tongue is dry also; while deglutition is performed with great difficulty.

Here, said Dr. Althaus, there are unmistakable signs of paralysis; but there are also signs of irritation. Such a coincidence, however, is by no means so singular as might at first appear. The brain is an exceedingly complex organ, and the gray cortex requires a larger supply of oxygenated blood than any other part. In poisoning by carbonic acid there is first a stage of irritation, and then this is followed by coma. In syphilitic coma there is also probably a a short stage of irritation. The initial stage lasts from two to five days, when recovery begins, or else the patient sinks into the final stage. In ten days or a fortnight he may apparently be well, and may be able to resume his accustomed occupations. In other instances, however, the improvement is more gradual; but it is to be noted that recovery, whether rapid or slow, takes place, as a rule, as the result of active specific treatment, and the medical attendant, if such is the result, has great reason to congratulate himself.

If, on the other hand, the progress of the coma is towards a fatal termination, at the end of the initial stage there is an intensification of the symptoms of loss of voluntary muscular power and reflex sensibility. The lower jaw drops, and the mouth lies wide open. The breath is fetid, and the power of swallowing becomes totally lost. The surface of the body is bathed in a clammy sweat, and the pulse is small, feeble and very quick. Finally it cannot be counted, and the sphygmographic tracing produced by it is that of a person in collapse. The respiration grows more and more rapid, and it may be of the Cheyne-Stokes character. Hypostatic pneumonia is also likely to result. This stage lasts from twenty-four to thirty-six hours.

Of the eight cases seen by Dr. Althaus, six ended in recovery, and two in death, in the first attack. In three of the six which recovered from the first attack there was a relapse. One of the patients recently died, after having had no less than five different attacks of syphilitic coma within three years.

The pathological explanation which Dr. Althaus gave of the affection was that it was due to occlusion of the basilar artery, which, as he pointed out, supplies some of the most important vital parts of the brain. He could produce no post-mortem evidences to support this hypothesis, however, as no autopsies were permitted in the cases which proved fatal; the opinion being based by analogy, on a number of non-syphilitic cases recorded by Vulpian, Bastian, and other authorities, in which sudden occlusion of the basilar artery caused death by profound coma. In the discussion which followed the reading of the paper, while it was admitted by a number of the speakers that occlusion of this artery might be in part the cause of the coma, it would not, in their opinion, entirely account for the condition. Thus, Dr. Amiden said that he thought a weak heart was an important factor in the production of syphilitic coma. Dr. Althaus had mentioned as the exciting causes over-exertion, anxiety, and alcoholic and sexual excess; and all these conditions were well recognized as conducing to weak heart. Taken in connection with a weak heart, he thought the arterial occlusion would satisfactorily account for all the phenomena so graphically described in the paper. Dr. Landon Carter Gray, of Brooklyn, expressed the opinion that the textural changes which take place in the brain in these cases were out of all proportion to the arterial changes, and he based this view upon two autopsies which he had had the opportunity of making, in cases where the coma was the predominant symptom before death; the paralysis present being secondary. The mere theory of some occlusion of the basilar artery, he thought, was not sufficient to account for the coma; and if the coma were very profound, it might be impossible to say whether any paralysis was present or not.

But to return to the paper itself. The diagnosis of syphilitic coma, said Dr. Althaus, may be easy or difficult according to the circumstances of the case. Apoplexy usually occurs in the aged, while this affection is rare in the prime of life, and apoplexy is attended with hemiplegia, which is lacking in syphilitic coma. The variety of apoplexy which the latter most closely resembles is that in which the hæmorrhage takes place into the pons. It may be mistaken for opium poisoning; but in syphilitic coma the pupils are not so extremely contracted as in either opium poisoning or hæmorrhage into the pons. If itching of the skin and retention of urine are present, it will indicate opium poisoning. The fits in epilepsy, hystero-epilepsy, etc., are of much shorter duration than an attack of syphilitic coma, and are also apt to be accompanied by biting of the tongue, frothing at the mouth, and perhaps petechiæ of the face.

In suspected alcoholic coma the odor of the breath is not a reliable sign, as alcoholic stimulants may have been administered at the onset of an attack of coma due to some other cause; but if the urine is found to contain alcohol, the diagnosis will be plain, since this agent, if taken in large quantities, is eliminated unchanged in the urine. The temperature is usually lowered in alcoholic coma, but not to so marked an extent as in syphilitic coma. Having spoken of the differential diagnosis of uræmic coma, Dr. Althaus went on to say that in diabetic coma, which terminates so large a proportion of the cases of diabetes mellitus, the peculiar dyspnœa and the presence of acetone and its allies in the breath and urine are principally to be relied upon in the diagnosis of this form of coma.

The prognosis of syphilitic coma is always grave, although not so hopeless as in the case of either uræmic or diabetic coma. It is serious, however, because the presence of this condition shows that the syphilitic disease has invaded the cerebral centres. Even if the patient recovers from the attack present, there is always danger of a return of the trouble. The prognosis of the immediate attack is usually favorable; but active treatment is required, and the future prognosis also depends to a large extent on this. Death or progressive paralysis of the insane is the fate of any patient who is unwilling to submit himself to persevering and prolonged medication.

In speaking of the treatment Dr. Althaus highly recommended the hypodermic injection of ether; the usual dose being 20 minims three or four times a

day. Blistering was sometimes of service, but ammonia was of little value; while the cold douche, applications of ice, etc., he thought did more harm than good. The great reliance must be on specific treatment, and the best method of employing it was in the form of mercurial inunctions. There was perhaps nothing so good for this purpose as the old time ointment; though the oleate of mercury, made with the yellow oxide, was excellent too. Lanolin could also be used with good results as a vehicle for the mercury. For hypodermic use the bichloride was the best preparation, and care should be taken to make the injections deep in the gluteal muscles, so as to avoid as far as possible the risk of abscesses.

In treating of syphilitic hemiplegia he referred to a variety of different types, scarcely any two cases being precisely alike; but remarked that they all had certain points in common. In the first place, syphilitic hemiplegia almost invariably occurred in males (95 per cent. of all cases being males); secondly, it occurred in the young (between the ages of 18 and 40); and third, it was characterized by the peculiar behavior of the deep reflex phenomena. The diagnosis of this affection by the test of treatment was often fallacious, for many cases were not materially benefited by specific treatment. There was, however, one truly pathognomonic sign, viz.: an excessive exaggeration of the deep tendon reflexes, both of the upper and lower extremities; and it is upon this symptom that Dr. Althaus depends in making the diagnosis of syphilitic hemiplegia. It can only be depended upon, of course, in cases in which the reflexes on one side are normal. The treatment, he said, is not always satisfactory, and therefore in such instances the prognosis is not good; and some cases unfortunately terminate in general paresis. It is the secondary consequences of the syphilitic process which often prove unamenable to treatment; for the removal of a syphilitic gumma will not restore the nerve cells and fibres which have already been destroyed. The lesson to be derived from these cases, therefore, is, that active treatment must be commenced as soon as there is the slightest evidence of cerebral trouble. The secondary ordinary lesions which result from syphilitic lesions of the brain are not, unfortunately, affected by anti-syphilitic treatment.

In discussing this division of the paper Dr. Robert W. Taylor, the well-known syphilographer, spoke of the labors of Drs. Van Buren and Keyes, of this city, in connection with syphilitic hemiplegia, and called attention to the fact that in a paper read here a number of years ago, which embodied these researches, and which had now been incorporated in several text-books, Dr. Keyes had described all the prominent symptoms to which Dr. Althaus had referred this evening.

As regards the treatment of cerebral syphilis, Dr. Gray remarked that he was somewhat surprised at the views expressed by Dr. Althaus. He depended, it seemed, entirely on mercurials, and had little or nothing to say in regard to iodide of potassium. For his part, he had some time since given up the use of mercury altogether in these cases, as he had never seen any beneficial results from it. He had had indisputable evidence in his experience of the superior value of the iodide, and he believed that this was the experience also of the great majority of neurologists in this country.

Dr. Putzel, on the other hand, stated that he agreed entirely with the author of the paper in regard to the marked efficiency of mercury. It was now about six years since he had become convinced that syphilis did not yield, or at least very slowly, to iodide of potassium. Formerly he employed the bichloride of mercury; but more recently he had found much better results from the use of inunction. It was his practice to employ this until the teeth began to be touched, and then to discontinue it. In connection with this, small doses of iodide of potassium sometimes seemed of service.

On the following evening Dr. Althaus read before the Neurological Section of the Academy of Medicine a paper on "The Pathology and Treatment of Paraplegia resulting from Potts' Disease," the object of which was to advocate the use of the actual cautery, and this at as early a period as possible; since if the sensibility was already affected, it would be of no service. It was the opinion of most of those present, however, that while in occasional instances the actual cautery might be beneficial, therre were other methods of treatment at our command which were, as a general rule, much preferable and much more efficient.

P. B. P.

MR. TAIT ON "OTOMIES."

TO THE EDITOR OF THE JOURNAL:

Dear Sir:—Having been much interested in the discussion on the letter of Mr. Lawson Tait to Dr. Nelson, read before the Chicago Gynæcological Society on May 28, I hope you will permit me to add a few words to what was said on that occasion.

I think that Mr. Tait is wrong in "protesting against those stupid Greek words ending in *otomy*," for by so doing he ignores a necessity, long recognized by scientists, of borrowing, from some classical language, their technical terms. If they were all of one nation and spoke the same tongue, there would be no such necessity; but in order that the different nations might profit by each other's work, it is necessary that they adopt conventional terms that would be understood everywhere.

The term "abdominal section," preferred by Mr. Tait, would do very well for all of us English-speaking people, but it would convey to a German no more meaning than his "Bauchschnitt" does to us. Without these conventional terms the work of any one nation would be a dead letter to all others, and and each would be obliged to prosecute their scientific studies independently; so that to communicate and compare their work, these conventional terms become a necessity.

The Latin and Greek languages, which occupy so important a position in the curricula of the colleges, are understood by educated men the world over, and have therefore been adopted as the medium of intercommunication. The Greek being the more fertile,

has supplied us with most of our technical terms, without which the study of the sciences would have dragged heavily, and could hardly by this time have reached their present status.

Though Mr. Tait is evidently a better surgeon than linguist, it is somewhat surprising that the term "oncotomy" should be new to him. He must have met with it, and it is strange that, by its very ugliness, it was not impressed on his mind. It is a very old word, being contained in Dunglison's dictionary at least forty years ago. Professor Fenger was evidently right in designating mere opening of an abscess or tumor by this name, its derivation being from the Greek *ογκος*, a tumor or abscess.

Mr. Lawson Tait objects to the word "laparotomy" "because the signification of its *derivatives* (italics mine) in the use of the people who spoke the language is such that it could not by any human ingenuity be applied to any modern surgical proceeding;" but he must be reminded that it is *we* who make the "derivatives" from the *roots* supplied by "the people who spoke the language" to describe "*our* modern surgical proceedings." A greater objection to this term, in my opinion, is, that it might justify an inference that the operation (abdominal section) was limited to the lumbar region, it being derived from *λαπαδα*, the loins. On this account "gastrotomy," which seems to be the favorite term with the French, is much less objectionable. But perhaps the term least liable to objection is the one proposed by Dr. Fenger, viz., "peritonotomy," notwithstanding it has the termination so abhorent to the distinguished English surgeon.

We all must acknowledge, however, that Mr. Lawson Tait's wonderful success in this particular branch of surgery, which has justly given him a world-wide reputation, should entitle him to the privilege of selecting its name, whether from the English or any language he prefers. S. K. JACKSON, M.D.

Norfolk, Va., August 20, 1886.

TOXIC URINE AND SURGICAL OPERATIONS.

TO THE EDITOR OF THE JOURNAL:

Dear Sir:—I am pleased with the editorial, "Toxic Urine and Surgical Operations," in THE JOURNAL of October 2d, and hope that Mr. Reginald Harrison is entitled to all the attention your article bestows upon him, but an American, Prof. Hal C. Wyman, of Detroit, published, some years ago, ideas so very similar to those you attribute to Mr. Harrison in his article in the *Liverpool Medico-Chirurgical Journal*, that I cannot refrain from using this occasion to say that Dr. Wyman not only described all the toxic effects mentioned by Mr. Harrison, but devised an operation for relief of hypertrophied prostate, the main feature of which was that no urine could come in contact with the wound to poison it.

The principles involved in your editorial are very important. I feel that it is only right that our countrymen should have full credit for any good work they have done. Under the title of "Tenotomy of the Levator Prostatæ," Prof. Wyman published an article in the *Medical Age*, of January, 1883, in which he advised special surgical measures to avoid the toxic effects of urine. At the time the article was often quoted by other medical journals, and must be still fresh in the minds of many American surgeons. DAYTON PARKER, M.D.

Bluefield, Mich., Oct. 5, 1886.

NECROLOGY.

JAMES IRVIN KELLER, M.D.

Died at his home, Hot Springs, Arkansas, on September 29, of typhoid fever, DR. JAMES IRVIN KELLER, aged 31 years, 5 months and 18 days. By request we clip the following from the *Memphis Appeal*:

The *Appeal* has already announced the death of this brilliant young man; but at the request of those nearly allied with the deceased we give additional particulars as to his death and our further estimate of his character. The deceased was young, handsome and accomplished. God gave him a massive intellect, and beneath his ample brow lay a capacious brain comprehensive in grasp and which did much mighty thinking. His language was ornate, his style terse and beautiful, and in conversation he was voluble and interesting. He was one of those extraordinary creations who leap into manhood without the probation of youth, for he was eminent in his profession by the time he reached his majority. No wonder his father, Dr. James M. Keller, and his mother, Mrs. Sallie Phillips Keller, made him the idol of their lives, and worshipped him as a bright particular star whose radiance was destined to grow in splendor long after they had crumbled into dust. But "whom the Gods love die young," and the sun of Dr. Irvin Keller went down ere it reached its noon, but is sunk amid the prophetic splendors of an eternal dawn. Never was there a death seen more pathetic than his. No man ever had greater inducements to live; but young as he was, he was a philospher, and he met the fate which his knowledge as a physician told him was inexorable with the courage of a hero. He summoned the family and his friends to his bedside, and said to Dr. Rector: "I am about to pay that debt which we all must pay sooner or later, but I shall do so like a man;" and death in all his triumphs never mocked at a scene so pathetic and heart-rending. Farewell, noble Irvin. We knew you in infancy, in childhood, in boyhood and manhood. Your life was a poem, a perfect star, and the loyal hearts that loved you are bleeding, but they will ever be harps tuned to the sweet melody of remembrance. You have left unfinished the beautiful pyramid you were building to your fate, but like the lightning which leaves more picturesque the shattered shaft, death has not destroyed the symmetry and brightness of your life. Heaven gave you everything but time to accomplish a great mission You "flashed, the meteor of an hour," and the darkness your death has created tells of the brilliance of the light that has forever gone out. While dropping tears over your grave, the sympathies of your loving friends will be lavished upon

the father and mother you loved more than all the world beside. With cautious and reverent hands your friends will lift the veil of that stricken sanctuary. The whole South sympathizes with the father and wife whose girlish love lighted up with joy his early home, and is the mother of one of the most talented sons that ever lived so beautifully and died so sadly.

AMERICAN MEDICAL ASSOCIATION.

FORMED IN 1846.

Next annual meeting will be held June 7th, 8th, 9th, and 10th, 1887, in Chicago, Ill. President, E. H. Gregory, M.D., St. Louis, Mo. Permanent Secretary, W. B. Atkinson, M.D., Philadelphia, Penn. Assistant Secretary, J. Nevins Hyde, M.D., Chicago, Ill. Treasurer, Richard J. Dunglison, M.D., Philadelphia, Penn. Librarian, C. H. A. Kleinschmidt, M.D., Washington, D. C. Chairman of Committee of Arrangements, Charles Gilman Smith, M.D., Chicago, Ill.

All membership dues should be sent direct to the Treasurer, RICHARD J. DUNGLISON, M.D., lock box 1274. Philadelphia, Penn.

MISCELLANEOUS.

PROFESSOR E. WILLIAMS, OF CINCINNATI.—It is with deep regret we learn that the health of this eminent ophthalmologist is so seriously impaired that he feels compelled to relinquish all professional engagements, including the Presidency of the Section of Ophthalmology, the duties of which he had been prosecuting with zeal and success, and to seek the restorative influences of rest and a more favorable climate.

NEW IMPROVED COMBINED TROCAR AND CANULA.—This instrument, an account of which was given in THE JOURNAL for September 25, Dr. H. L. Getz wishes us to state may be procured of George Tiemann & Co., New York, the well-known surgical instrument makers.

AMERICAN PHARMACEUTICAL ASSOCIATION.—At the last meeting of this Association the following resolution was adopted:

Resolved, That this Association solicit the aid and coöperation of the American Medical Association, in promoting the prescribing by physicians of officinal medicines only, or such preparations as have published formulas, in preference to others; and that the several State Pharmaceutical Associations make similar requests of their respective State Associations. —*Medical News*, Oct. 16, 1886.

SUCCI'S FAST.—The *Sanitary News* says: The somewhat phenomenal fast of Signor Succi, at Rome, which was recently brought to a conclusion after thirty days' continuation was undertaken to convince people of the efficacy of his herb liquor as a life sustainer. The experiment can be called a fast only because the gentleman consumed nothing but his herb liquor in given amounts, and draughts of mineral waters. In point of continuance the fast of the notorious Tanner lasted ten days longer than his Italian imitator. But while Tanner came out from his fast greatly emaciated and weakened, Succi lost none of his strength and vitality. The first three days of the recent fast were passed in bed, but after that Succi rode on horseback and took violent exercise nearly every day. His abstention from food is declared positive by those who watched him constantly. The success of his herb liquor in sustaining life is but a forerunner of what chemists may do for us in future years, when it may be that a closer study of the requirements of the human frame will reveal foods in forms we know not of, and when the refreshing meal may come from the apothecary's rather than from the shambles.

OFFICERS OF THE WASHINGTON OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY FOR THE ENSUING YEAR. —President, A. F. A. King, M.D.; Vice-Presidents, S. C. Bussey, M.D., and W. W. Johnston, M.D.; Rec. Secretary, H. M. Cutts, M.D.; Cor. Secretary, S. S. Adams, M.D.; Treasurer, George Byrd Harrison, M.D.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM OCTOBER 9, 1886, TO OCTOBER 15, 1886.

First Lieut. Edward Everts, Asst. Surgeon, ordered to proceed to Ft. Grant, A. T., and there take station. (S. O. 94, Dept. Arizona, Oct. 1, 1886.)

First Lieut. W. W. R. Fisher, Asst. Surgeon, ordered, on the expiration of his leave of absence, to report to the commanding officer, Ft. Bidwell, Cal., for duty as Post Surgeon. (S. O. 93, Dept. Cal., Oct. 4, 1886.)

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY, DURING THE WEEK ENDING OCTOBER 16, 1886.

Woolverton, Theoron, Surgeon U. S. N., detached from the U. S. S. "Shenandoah," proceed home and wait orders.

Means, V. C. B., Asst. Surgeon U. S. N., detached from the U. S. S. "Shenandoah" and ordered to receiving ship "Independence."

Parker, J. B., Surgeon U. S. N., detached from the U. S. S. "Swatara," proceed home and wait orders.

Shafer, Joseph, Asst. Surgeon U. S. N., detached from the U. S. S. "Swatara," proceed home and await orders.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U. S. MARINE HOSPITAL SERVICE FOR THE WEEK ENDED OCTOBER 9, 1886.

Peckham, C. T., P. A. Surgeon, granted leave of absence for thirty days, to take effect when relieved. Oct. 5, 1886.

Kalloch, P. C., P. A. Surgeon, granted leave of absence for twenty-one days, to take effect when relieved. Oct. 5, 1886.

Pettus, W. J., Asst. Surgeon, to proceed to Evansville, Ind., for temporary duty. Oct. 8, 1886.

Kinyoun, J. J., Asst. Surgeon, appointed an Asst. Surgeon, Oct. 4, 1886. Assigned to temporary duty at New York, N. Y., Oct. 5, 1886.